

The Citrus Industry

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Representing no special interest

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No. 4

Horticultural Society Meets In Cocoa In May

Cocoa is to be host to the members of the Florida State Horticultural Society. The thirty-ninth annual meeting of this Society has been called to meet at Cocoa on May 4th, 5th, 6th and 7th: The meetings begin on the night of Tuesday, May 4th and night sessions until Friday, May 7th. The New Indian River Hotel has been selected as headquarters for the Society and the meetings will be held in the Cocoa High School auditorium.

It is quite fitting that Cocoa should be host to this Society. It is in the heart of what is perhaps the oldest citrus section in the State, and the Horticultural Society is the oldest Horticultural Society in the State. The founders of each are of the past and passing generation and a new generation is now carrying on the work started by them. Cocoa is located on the east coast of Florida, on the banks of the famous Indian River, which gives the name to the famous brand of oranges known as Indian River oranges. Citrus growers from other sections of the State will be interested to attend this meeting and see the place where these famous oranges are grown and the conditions under which they are made.

The object of this Society is the advancement of horticulture in the State. The program of its meetings includes papers and addresses by experts from the United States Department of Agriculture and the State Agricultural Experiment Sta-

tion and by practical growers. While citrus fruits are usually given most attention, all other fruits grown in the State are discussed from the standpoint of their best culture. The program for the meeting at Cocoa is not yet completed when this article is being prepared, but of the various addresses which have already been promised the chief citrus topics that will be discussed are: "Citrus Aphids"; "Pruning of Citrus Trees"; "Soil Building in the Citrus Grove"; "Classification and Agricultural Value of the More Important Soils in Bearing Period of Tangerines"; "The Problem of the Small Fruit Farm"; and other subjects along this line. The ornamental program will include discussions of bulb culture in Florida; "Roses and their Culture"; "Golf Grasses and their Culture"; "Florida Ornamental Plants"; "A Florida Arboritum"; etc. Avocados, mangoes, papayas and other sub-tropical fruits will be discussed by growers and experts.

In addition to the program it is expected, if the rose stock in the State will permit, to have a rose show which will be held under the auspices of some of the organizations in Cocoa. There is also a movement on foot to organize a Florida rose society and any grower of roses, either commercial or amateur, is requested to communicate with the Secretary of the Horticultural Society at Davenport, Florida, in case they wish to become affiliated with

this new organization.

How to Reach Cocoa

Cocoa is located on the east coast in Brevard County, almost due east of Orlando. It is on the Dixie Highway between Miami and Jacksonville. Those living in the interior of the State or on the West coast will motor to Orlando, going east from there on the Cheney Highway to Indian River City, and from south on the Dixie Highway to Cocoa. The roads are all paved and in good condition.

Membership in The Society

The members or prospective members in the Florida State Horticultural Society are requested to send their dues to Mr. W. W. Yothers, Asst. Secy., Box 719, Orlando.

Anyone who is interested directly or indirectly in horticulture is eligible for membership. The dues are as follows:

Annual Dues

Annual dues are \$2.00 and are due and payable before the annual meeting, and should be sent to W. W. Yothers, asst. secy., Box 719 Orlando, Florida.

Perennial Dues

Those members who do not wish to bother with payment of dues annually may become perennial members by paying annual dues five years in advance.

Life and Patron Dues

The life membership fee is \$25.00. The society is endeavoring to build

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Bright Fruits

The Market Value of Bright Fruit

By F. L. Skelly, Manager American Fruit Growers Inc., Orlando, Florida

Bright, clean fruit of good quality is the most appealing to the consumers of Florida citrus fruits and is the recognized foundation of successful sales and advertising. People judge largely by appearance in the purchasing of any commodity and this is especially true of fruit. In the larger markets of the country, practically all citrus fruits are sold at auction. Growers who follow the sales in such markets from day to day can see very clearly the advantage of producing clean, bright fruit of this character, fruit that is appealing to the eye as well as to the taste.

Buyers as well as consumers do not care to take chances and are willing to pay for the assurance that the fruit is what they want. Fruit should be extensively advertised and distinguished in a way that the purchaser will get this assurance and know just what he is getting at all times.

It is a well known fact that it is not always possible to produce, good, bright, well shaped and thin skinned fruit, the root stock, soil and climatic conditions all enter into the quality of fruit produced and is not under the control of the grower at all times.

This season the crop is generally short. When less than a normal crop is produced the quality and texture of the fruit produced, in a great many instances, will not be as fine as when the trees have a normal crop.

This season, while bright fruit of good quality sold at considerably higher prices than inferior fruit, all fruit out of the state brought very good returns and most growers were well pleased with these returns, even though they may have produced poor quality fruit. However, if the grower was fortunate enough to have a crop of good quality bright fruit he made very handsome profits on his investment and labor.

When we have a normal crop of fruit produced in the state then the inferior fruit is in danger of bringing less than the cost of production. However, the grower producing good fruit is quite sure of making a fine profit, having it properly packed, advertised and sold he should always get very favorable returns on his

labor and investment. The increased production of fruit of poor appearance will always continue to be much less profitable and in many cases be very unprofitable to the Florida grower.

We have many varieties of fruit in the State of Florida, this State producing nearly every variety of oranges and grapefruit known, while California has practically only two varieties, navels and valencias. California fruit on the whole is clean, bright fruit of fine appearance and although it is a recognized fact that Florida fruit is much heavier in juice content the public still purchase by appearance. Florida fruit is becoming more profitable each year on account of its heavy juice content and flavor and through the extensive advertising that has been done in the past.

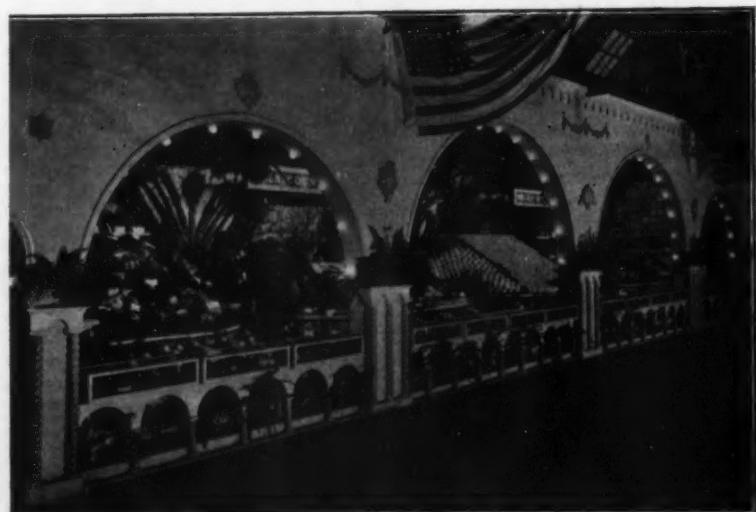
Florida fruit is generally graded in three classes—brights, goldens and russets. Efforts have been made to change these grades but these were considered unsuccessful. In recent years the so called russet grade is not the true russet grade at all but an inferior fruit, probably melanose, misshapen or scabby. Good russet fruit is desired by a great many dealers and consumers but we would never consider it desirable to try to produce russet fruit. There will always be russet fruit and it would be much better if this grade was kept

strictly up to a russet grade and all inferior fruit put under a separate grade and sold for what it really is.

In the past, there has been considerable advertising done and much money has been wasted because with advertising a standardization of the product shipped must be established under a trade name that will fully guarantee the consuming public what is claimed in this advertising. We would consider it a serious mistake to advertise Florida fruit that does not come up to certain specifications of quality. In other words, there never can be any real benefits obtained from the advertising of a product that would not come up to required standards. The public must always know what is first class, guaranteed fruit, and what is known as second grade, or cull fruit. In a great many instances in the past the public has been buying second grade or cull Florida fruit and were not able to make a distinction between this and that of the first class.

At the present time a system has been devised whereby a certain line of fruit is now being marketed with the trade mark stamped into the peel of each fruit and is recognized by the dealers and public as a product that is standardized. The consumers, in buying this product, have a guarantee of quality and know what they are getting at all times through this

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Bright Fruit Appeals to the Eye

An Easy Way to Produce Bright Fruit

By John R. Winston

The production of crops of bright fruit in Florida is so easy and the cost so insignificant that it is really difficult to comprehend why more of our fruit does not meet the first grade requirements. It is or should be a matter of common knowledge that practically all of our citrus fruit blemishes are easily prevented with but little expense attached thereto.

Some growers assert that insect and disease control is an economically unsound investment. This is doubtless true in a few especially favored localities. On the contrary, however, practically every fruit shipper who is also a grower takes special precautions to keep his crops free of insect and disease blemishes. Surely the successful shipper is in an excellent position to know the true value of bright fruit.

Bright Grapefruit, Tangerines and King Oranges

These species are somewhat difficult to keep free of blemishes by virtue of the fact that they are more susceptible to the common diseases than the oranges. They are also more subject to spray burn.

In grapefruit, tangerine and King orange groves where neither scab nor melanose has occurred in quantity in the past, the cost of crop protection should be low. A thorough application of 1 to 40 lime sulphur solution plus 1 to 100 calcium caseinate, or a heavy application of sulphur dust applied within a few weeks after blooming period, will most likely give adequate protection against spiders and mites until summer or possibly until fall. If the trees are now reasonably free of scale and white fly, oil spraying probably will not be needed before autumn.

Those grapefruit groves that have been subject to scab and melanose in the past should be sprayed at once with 1 to 40 lime sulphur solution plus calcium caseinate. Such an application is reasonably effective against scab and it also controls spiders and mites. An application of 3-3-50 Bordeaux plus 1 per cent oil as emulsion plus 1 to 100 calcium caseinate should be made between April 20th and May 5th for the prevention of melanose. Home-made Bordeaux is cheaper, better and usually safer than the commercial product. By all means use calcium caseinate with any

Bordeaux-oil combination at that season; otherwise, severe injury to the fruit may result.

Experience has shown that wherever a Bordeaux or Bordeaux-oil application is made during the spring, scale insects are almost certain to increase rapidly during the summer months and do serious damage be-

One or possibly two applications of sulphur dusts during the summer months may be necessary where a spring application of Bordeaux is put on in order to prevent rust mite injury.

In the past serious injury has occasionally resulted where applications of sulphur, either spray or dust, were



Sprayer at Work

fore fall unless special measures are taken to prevent this excessive infestation. Experience has also shown highly efficient oil emulsion applied between June 20th and July 10th, the period when scale insects are hatching in greatest numbers—is almost imperative. Calcium caseinate should be added to the emulsion to prevent the development of "oil shadows" and other types of spray injury. The importance of this application cannot be over emphasized. If the grower has any doubt about spraying in late June, he had better omit the application of Bordeaux. If the summer application of oil emulsion is applied with maximum thoroughness the regular fall application of emulsion may be unnecessary.

THIRTY-FIVE FARMS ARE TERRACED IN OKALOOSA

Laurel Hill, Fla. — Thirty-five farms of the county with a total acreage of more than 1,000 acres have been terraced in Okaloosa County this winter under the supervision of County Agent R. J. Hart. Terracing work to prevent washing of the land has been stressed this winter in the county.

made shortly before or after spraying with oil during hot weather. To prevent this damage the time interval between such applications should be at least ten days.

Bright Oranges

Oranges are rarely attacked by the scab fungus. On the other hand, they are far more subject to ammoniation than are grapefruit. Fortunately an application of Bordeaux or Bordeaux-oil properly timed, not only prevents melanose but ammoniation as well.

For all practical purposes the program outlined for grapefruit applies equally well for oranges. It is the safest general schedule that can be devised for those who must get maximum results from money and time invested. This program has been followed by many growers in the past and it has given excellent results.

Considerable work along the same line has also been done in Leon, Madison, and Jefferson counties under the supervision of county agents G. C. Hodge, B. E. Lawton and E. H. Finlayson, respectively.

Pure strains of cotton have been found by the U. S. Department of Agriculture to have a greater spinning value as well as a higher production value.

Citrus Fumigation

By W. E. Evans, American Cyanamid Sales Company, Eustis, Fla.

The most effective method to my mind of controlling citrus pests in the Florida, Alabama and Texas citrus belts, is by fumigation under tents, using Cyanogas Citrus Dust, which has for its killing agent hydrocyanic acid gas—one of the most important discoveries in the field of insect control.

For over thirty years the citrus growers of California have controlled their insect pests chiefly by fumigation with hydrocyanic acid gas. In Farmers Bulletin No. 1321 of the U. S. Department of Agriculture, Prof. R. S. Woglum says: "The use of hydrocyanic acid gas in fumigating plants for the destruction of insect pests is one of the most important discoveries in the field of insect control. No other known gas having so wide a range of usefulness so quickly destroys insect life. Nearly every year new sprays have been offered in competition with the gas method, but fumigation has outlived them all and hydrocyanic acid gas is today, even as thirty years ago, by far the most effective of all insecticides for scale control on citrus trees on the Pacific Coast."

Hydrocyanic acid gas is now used for scale control in United States, Australia, South Africa, Egypt, Spain, Palestine and Japan.

Professor H. J. Quayle of the Citrus Experiment Station, Riverside, California, conducted the first experiments with Cyanogas calcium cyanide dust in 1922—when he dusted twenty-five tented citrus trees and got a complete kill of black, red and citricola scale insects.

During the past eighteen months, entomologists of the American Cyanamid Sales Company in co-operation with the Florida Agricultural Experiment Station entomologists, have made extensive and exacting experiments in the citrus belt of Florida. The result of these experiments has been the evolution of a simple and successful day time fumigation method using Cyanogas Citrus Dust, a combination of calcium cyanide and finely ground sulphur. The sulphur was added so that not only all scale insects and white fly would be destroyed, but the rust mite, red spiders, and various mites.

The method now in use consists in discharging under the tent covered tree a measured amount of Cyanogas Citrus Dust, which on exposure to the air gradually liberates the

hydrocyanic acid gas, effectively killing all animal life.

The fumigation crew consists of two men to cover the trees, and a foreman to measure the tented tree, and discharge the proper amount of dust under the tent onto the ground.

We have been using the regulation California tents made of eight ounce duck, as this grade has been found after thirty years experience in California fumigation to be the most economical tent to use in the long run. These tents with ordinary care should last six years or longer in constant use. The effect of Cyanogas seemingly preventing mildew.

The tents are octagonal in shape, and so marked that the distance over the tree is easily read; by the use of a special measuring tape around the circumference of the tent the proper dosage is instantly determined.

A crew of two laborers to pull the tents over the trees and a foreman to measure and discharge the dosage under the tents can easily handle eighteen tents that will cover trees twelve to 15 feet in height. Larger trees require larger tents and of course require a longer time to cover.

We begin operations in the morning as soon as the trees are dry, spreading the tents out on the ground with the seams towards the tree to be covered. Each tent has an iron ring sewed in each corner to which a 3-4" cotton rope is fastened with a snap. Two poles with iron spikes in the ends are used in pulling the tents over the trees. They should be slightly taller than the tree. The spikes in the poles are inserted in the ring, the ropes snapped on to the rings.

After the poles and ropes are thus attached to the tent the operators standing on the end of the poles begin to pull the tent over the tree, gradually moving backwards as the tent comes over the tree and falls into place. The tent is then evened up on the tree is necessary and tucked in around the bottom. The laborers move on to the next tree while the foreman measures the tree and discharges the proper dosage under the tent.

After a few days, the crew becomes quite expert in handling the tents and can cover the trees with very little effort.

Each tree is fumigated for a 45 minute period and the tent then loosened up and pulled half way off the tree, and the poles and ropes attached and swung over the tree in the next row.

In order to make time, you should use just as many tents as can be conveniently handled in a forty-five minute period, so that when the time is up to move the first tent, the crew should be ready to throw it over the first tree in the next series.

The tent should be left on the full 45 minutes to get the full effects of the gas. A few minutes overtime however on any tents is of no consequence.

The dust is applied with a dosage duster. The hopper holding about 15 pounds of dust, under which is a measuring device which drops one ounce of dust into the discharge chamber on each turn of a crank. After the required dose is measured out, it is blown out of the discharge pipe through the hose placed under the tent, onto the ground. A harm-



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less residue is left after the tents are removed.

Fumigation is continued through the day till near dark and can safely be done any time of the year except when the trees are in a flush of growth, or when wet with dew or rain. Any time that is good spraying weather is good fumigation weather. It is never too hot to fumigate, but never dust a wet tree and don't take too many chances on getting your tents wet.

The entomological department at Gainesville carried on a series of fumigation experiments using cyanogas citrus dust last April and May at Davenport, Florida, and got an almost perfect kill in Florida red and purple scale.

The entomologists of the Cyanamid Company then ran a series of tests from the middle of September, till about March 1st. This work has been carefully checked by Prof. J. R. Watson, Entomologist of the Florida Experiment Station, from time to time. In the February 27, 1926 issue of the Florida Grower he says: "Although the hydrocyanic acid gas kills practically all citrus insect pests

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counts in future fumigations to show fewer of these trees with a poor kill. The average kill in Florida red scale has been 98 per cent. This is more satisfactory than in the case of the purple scale. The Florida red scale is a very difficult one to kill with ordinary sprays; and the ease with which it is killed in this fumigation process would seem to be one of the most promising applications of the use of hydrocyanic acid gas."

The difficulty that Prof. Watson mentions about the dosage duster not functioning properly has been overcome, and all trees should receive the proper dose, and the kill should be almost perfect.

The control of citrus aphids is a much more simple affair than regular fumigation. All that is necessary is to put a light tent over the aphid infested tree, blow a few puffs of Citrus dust up thru the tree, leave the tent on not over four minutes, and the result is 100 per cent kill. The number of trees that can be covered in a day, simply depends on the number of workers, the number of tents used, and how fast they want to work.

Never has there been a time when

Nine

pests that take such a toll from the Florida fruit.

HORTICULTURAL SOCIETY

MEETS IN COCOA IN MAY

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up an endowment fund. Members who wish to contribute to this in a small way may do this by taking a patron membership. This fee is \$100.00. This fee, as well as the life membership fee, is invested in United States bonds and only the interest can be used for current expenses.

Proceedings

Those who cannot attend the annual meeting can get a report of the meeting from the annual publication of the Society, which contains all of the papers in detail that are read at the annual meeting. This report is sent to the members only.

The officers of the Society are as follows:

President: L. B. Skinner, Dunedin; Vice-presidents: W. J. Krome, Homestead, S. F. Poole, Lake Alfred, Wm. Sessions, Bonifay; Secretary: Bayard F. Floyd, Davenport; Assistant Secretary, W. W. Yothers, Orlando; Treasurer: L. D. Niles, Sarasota.

LATE TRADE NAME

REGISTERED

Trade names for citrus fruits have recently been registered with the U. S. Patent Office as reported by the National Trademark Company, Barrister Bldg., Washington, D. C., as follows:

"SAM HOUTON" No. 221, 290. Texas Citrus Fruit Growers Exchange, Mission, Texas. For fresh citrus fruits.

"NUGGET" No. 223,058. Strathmore Fruit Growers Assn., Strathmore, Calif. For fresh citrus fruits.

"CHECKER" No. 212,547. Almira Etta Ferguson, Hood River, Oreg. For fresh apples.

"MERRIE SUNSHINE" No. 220, 800. Archie N. Pratt, Redlands, Calif. For fresh citrus fruits.

"SMILE" No. 222,251. C. D. Hubbard Fruit Co., Carpinteria, Calif. For fresh citrus fruits.

"PLANET" No. 219,849. Santiago Orange Growers Assn., Orange, Calif. For fresh citrus fruits.



with the exception of mealy bugs, our work has been mostly with purple scale, Florida red scale and rust mites—the average kill of purple scale in the past few weeks has been 95 per cent. On most trees it is much better than this, but in checking up behind the fumigating outfit we occasionally run across a tree with a much poorer kill than others. This brings the average down to 95 per cent. It is probable that the poorer kills on these occasional trees are due to the trees not receiving the proper dosage. In the earlier work considerable difficulty was experienced in getting a machine that would quickly and accurately measure the dosage. This problem seems likely to be solved. We expect the

importance of producing bright fruit is so necessary as now, and if one is to produce bright fruit, it will be after we have controlled the citrus pests more thoroughly than we have in the past, and fumigation under tents offers to the citrus growers a method that will insure bright fruit. High grade fruit can be sold when the owner desires to sell it, the lower grades can be sold only when the buyer wants it. This is an important item in the marketing of citrus fruits. California citrus growers recognized its importance long ago. Florida growers are just beginning to. All that has been lacking in the Florida district has been a successful method for the control of the citrus

Go over all trees, shrubs and vines and rub or cut off new shoots that have started in the wrong places or are crowded. It will pay much better to do a little easy pruning now than to wait until next winter when plants have made a lot of misplaced growth and then have to cut it away.

Some Factors In Spraying and Dusting

By Bayard F. Floyd, Florida Agricultural Supply Company

In a recipe for cooked hare, some one once made the sage remark, "First, Catch Your Hare". This advice is sound and in a program for the spraying and dusting of citrus trees to produce bright fruit, it might be put, "First, Be sure you have reason to Spray or Dust".

It is obviously impossible to have cooked hare without the hare; it is equally impossible to control diseases and pests where there are none or where there are likely to be none. It is also impossible to control or prevent these troubles without using the proper materials at the proper strength, or to get results without applying the materials at the proper place, in the proper manner and at the proper time.

It is not difficult to find some diseases or pests in the average citrus grove at sometime during the year. They may not be sufficiently plentiful or wide spread to require artificial methods of control because of natural enemies or conditions that hinder their development. Occassionally something happens that interferes with these natural control factors, and the troubles then multiply and spread to an extent that produces more or less injury to the tree and fruit.

At this point, the grower must decide whether it will pay him to use artificial means of control. For example, the growth is sufficiently advanced that the multiplying aphids may not cause much damage. The price he has received for his russet fruit may be as much if not greater than he has received for his bright fruit. This raises the question in his mind whether or not it will pay him to spray or dust. These as well as other situations must be decided by him, remembering that if his judgment is bad and he fails to use some method of prevention or control, his trees and fruit may be badly damaged.

There is plenty of statistical evidence to prove that it pays to make bright fruit and to grow fruit of good quality. In the last decade or more, thousands of dollars have been spent for expensive machinery to clean, polish and pack the fruit. More thousands have been spent in power equipment for spraying and dusting

the trees to control the agencies that mar the appearance of the fruit. It is the common judgment, based upon financial returns that this investment pays. It has been said that you can fool some of the people some of the time, but you cannot fool all of the people all of the time. The fact that so large a percentage of growers spray or dust their trees should be good evidence to the average grower that it will pay him to spray.

Having decided to use some control measures, three situations confront the grower. FIRST, HE MUST HAVE THE NECESSARY EQUIPMENT FOR APPLYING THE SPRAYS OR DUSTS. This should be of sufficient size to deliver the volume of spray or dust required, in a reasonable length of time. It would be foolish to try to spray an old bearing grove for Citrus Scab with a knapsack sprayer. It is equally foolish to try to spray trees of large size and considerable acreage with a power sprayer having only 100-gallon tank and two horse power engine.

The equipment should be such that it will break the spray material into a fine mist or the dust into a cloud, so as to give an even spread over the tree surface. The machinery should be that which will give continuous and efficient service. In power outfits, the engine should have surplus horsepower as well as durability for the work to be done. An engine run at its full capacity, hour after hour, cannot last anymore than an automobile run at its maximum speed day after day. A simple well balanced engine with plenty of power light in weight, compact, enclosed, dustproof, with splash lubrication, air cleaner, bearings of extra strength, throttle governed and built along the line of the automobile type engine is an advantage.

But with the best machinery, the operator cannot hope to get good service unless he does his part by giving it good care. The tendency is to expect too much of such machinery. Tinkering by those without knowledge or knack is almost sure to leave the machinery in bad shape. Under such conditions, it is human nature to condemn the machine.

The spray pump should be efficient and durable and of such strength that it will stand up under the strain

of continuous usage. It is an advantage to have porcelain lined cylinders that resist wear and the action of chemicals; a spring pressure regulator and a system of threadless ball valves arranged for ready removal for cleaning while the engine is running with full operating pressure; reversible seats for the valves; gravity flow of the spray material to the pump thru an iron well with cut off and strainer; underneath suction into the cylinders; cup shaped plungers with packing that is easily installed; eccentric drives for the plungers.

In dusting, the knapsack dusters are sufficient for small trees; but to cover larger trees and a large acreage, a power duster is necessary. As with the sprayers, this should have ample power and capacity. The fans should give sufficient volume of air to carry the dust out in a cloud and into the trees. It is an advantage to have a duster head equipped with a self-mixing propeller, as there is a considerable saving in cost of material to the grower who makes his own nicotine dust.

SECOND, THE GROWER MUST HAVE THE PROPER MATERIALS FOR HIS SPRAYING AND DUSTING, and they should be used at a definite strength and be applied timely.

To use his sprays and dusts intelligently, he should know the nature of the active ingredients and their strength. In diluting he will use care to use the amounts of stock to give the strength that experience has shown is necessary to control or prevent the diseases and pests, without injury to the trees and fruit. Guess work in this operation is not only wasteful but also hazardous.

The use of dusts containing less than 3 per cent nicotine, unless combined with ammonia, is likely to give a very unsatisfactory kill of citrus aphids. The application of sulphur dusts or lime sulphur solution after the fruit is well covered with rust mites, will not produce bright fruit. The application of Bordeaux-oil Emulsion after the first summer rains when the fruit has become infected will not prevent Melanose markings on the fruit. The use of the same material or of lime sulphur solution after the newly set fruit has been in-

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Spraying a duster - Citrus fruits

A Device for Dusting Citrus Trees in the Wind

By J. R. Watson

The work of the Experiment Station and the State Plant Board for the last two years has demonstrated pretty definitely that the cheapest and by all means the quickest and

a curtain rolled up. This, when lowered, should reach the ground and cover the side of the tree opposite the duster. Note also at the back another curtain rolled up. This, when

the duster is driven along. It should be six or ten feet longer than necessary to reach the ground. The extra length will cover the tree better.

Fig. 2 shows the apparatus in operation. The hood is just leaving one tree and starting over another. Note the opening opposite the operator of the discharge nozzle. This enables the operator to dust the tree as if it were in the open.

When in operation the machine should be driven perpendicular to the direction of the wind. It also works well when driven with the wind, but not when operated against the wind. It would not be advisable to take it out in extremely high wind, but in a recent trial it worked entirely satisfactorily in a wind blowing at the rate of about ten miles per hour. This would enable dusting to be carried on during almost any spring day.

The device should be useful not only in aphid control but in dusting for rust mites as well. The cost of the attachment was about \$100 including labor.

A hot iron and a clean piece of blotting paper are good for taking grease spots off of wall paper.

The United States and Canada have proclaimed the week of April 18 to 24 as American Forest week.

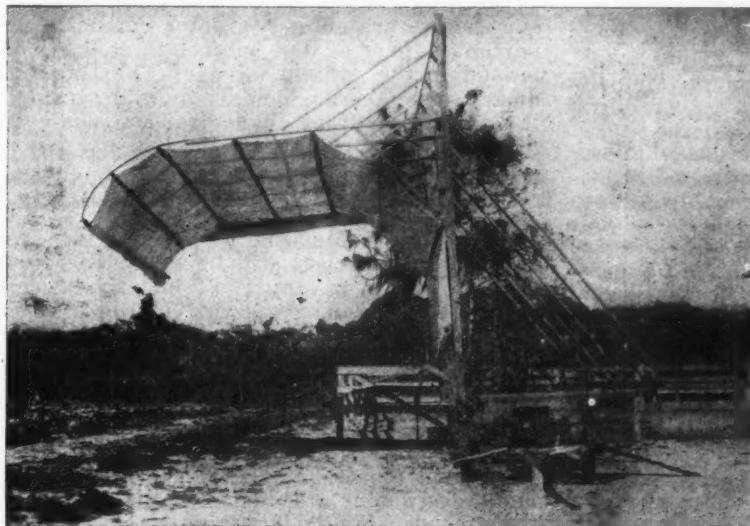


Fig. 1

most thorough way of dealing with citrus aphids on a large scale is to dust them with nicotine-sulphate-lime dust with a power duster. However, to get a thorough kill the atmosphere must be quiet. The cloud of dust must hover around the trees for a full minute. Any wind strong enough to prevent this will render the dusting inefficient. Unfortunately, the season of greatest aphid damage is also the season of strong winds. So that there is a very small part of the time when dusting is practical. Perhaps there will not be a single hour in a whole week when it will be quiet enough to dust effectively.

To get around this difficulty the officials of the State Plant Board and the Experiment Station have devised a tent-like covering to be attached to a power duster to enable one to dust even if there is considerable wind blowing. We are carrying in this issue two photographs of this apparatus. Fig. 1 shows the apparatus with curtains rolled up, showing the framework and the way it is made. At the left will be noticed

the duster is in operation, is lowered and closes the back of the duster. It is attached only at the top so that it can easily be pulled over a tree as

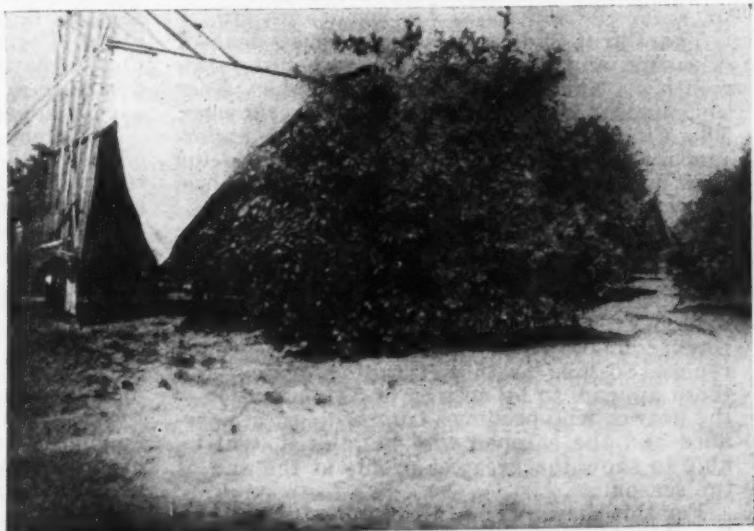


Fig. 2

The Citrus Industry

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S. L. FRISBIE, Editor and Manager

A. G. MANN _____ Production Manager

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Branch office and production plant, Bartow, Florida.

GROVE CALENDAR FOR APRIL

Timely Suggestions for Grove Work During the Present Month

Continue frequent cultivation of groves. Watch for rust mites; if found in numbers spray or dust with sulphur immediately.

Spray to combat melanose with 3-3-50 Bordeaux-oil emulsion (1 per cent oil).

Spray peaches with "self-boiled" lime-sulphur (8-8-50) and lead arsenate to control brown rot and curculio.

Pick up peach drops.

Continue clean cultivation of pecans with disc harrow. Spray big trees every two weeks to control disease.

ANNUAL BRIGHT FRUIT NUMBER

The Citrus Industry takes a great deal of pleasure and some pride in presenting this month its annual Bright Fruit Number. Ever since its first issue, now more than six years ago, The Citrus Industry has stressed the importance, nay, the absolute necessity of producing fruit not only of first quality, but fruit of finest appearance.

Whether we wish it or not, the buyer, like the lover, gains his first impression by outward appearance. He is attracted or repelled by that outward appearance, and whatever may be the hidden excellences, they are likely to remain forever unknown if the outward appearance repels. So long as this attitude prevails—and there appears to be no sign of its diminution—the grower who produces fruit of finest appearance and the shipper who handles it, will be able to show the greatest profits at the end of the season.

For this reason, The Citrus Industry believes that too much stress cannot be laid upon the production of bright fruit, and for this rea-

son each year it endeavors to bring out the best thought of the best minds in the industry bearing upon this subject in its varied forms.

In this issue the marketing appeal of bright fruit is handled by one of the leading fruit men of the land, while the various methods of producing bright fruit are presented by men of unquestioned authority in the industry. Spraying, dusting and fumigation, every method of combating diseases and pests which mar the outward beauty of the fruit, is touched upon by men who have given the subject much study and deep thought, and who in actual grove practice have put into effect the methods which they present for the benefit of other growers.

We believe that no Florida publication has ever before presented a greater number of important papers on the subject than those embraced in the present issue of The Citrus Industry, nor papers which are more deserving of the careful study of citrus growers whose aim it is to produce bright, attractive fruit.

THE HORTICULTURAL MEETING

The Annual Meeting of the Florida State Horticultural Society will be held this year at Cocoa, Florida, on May 4 to 7 inclusive, according to announcement carried in this issue by Bayard F. Floyd, secretary.

No state in the Union owes more to its Horticultural Society than does Florida, and particular the citrus industry of Florida. In times past, when disaster has threatened the industry, the officials of the Horticultural Society have been the first to tender their aid to state and government officials in stamping out the threatened calamity. Frequently these officials, at personal loss to themselves, have neglected their business and given their time and efforts to further the interests of the industry as a whole. For this reason, Florida citrus growers have always been amongst the most active and loyal members of the society.

That the meeting this year, the first to be held on the East Coast for some years, will be one of unusual interest, is the promise of President L. B. Skinner and Secretary Bayard F. Floyd. The program will cover every phase of Florida horticulture, with citrus of course predominating, and an exceptionally large attendance is hoped for.

The membership fee, only \$2, should be mailed promptly to W. W. Yother, assistant secretary, P. O. Box 491, Orlando, Florida. No citrus grower can afford either to miss this meeting of the Society or to neglect sending in his small membership fee.

TO ADVERTISE FLORIDA FRUITS

Probably no action ever taken by Florida citrus interests has promised so much for the industry as a whole as the recent action of the Fruitmen's Club at its Orlando meeting in unanimously endorsing the co-operative advertising proposition submitted by C. C. Commander, general manager of the Florida Citrus Exchange.

The expenditure of one million dollars, the amount proposed by Mr. Commander and en-

dorsed by unanimous vote of the Fruitmen's Club, if wisely spent under proper supervision, cannot fail to have a beneficial effect which will be felt in increased returns by every citrus grower in the state. That wisdom will govern the action of the proposed advertising corporation is forecast by the personnel of the committee named by President V. B. Newton to formulate the plans for the campaign and outline the basis of the organization.

Headed by L. B. Skinner, one of the largest and most prominent growers of the state, and including such notable leaders of the industry as C. C. Commander, Frank L. Skelly, J. C. Chase, Lawrence Gentile, W. H. Mouser and Chas. Fugazzi, this committee embraces the largest citrus factors and many of the biggest men of the state. They may safely be trusted to properly safeguard the interests of the industry of the state.

The greatest promise of the ultimate success of the undertaking is seen in the perfect harmony and absolute unanimity, both of expression and action, which governed the Orlando conference. This spirit of harmony and unanimity was in marked contrast to some previous efforts to bring about unity of action on the part of competing citrus interests, and evidenced the realization of all interests of the importance of the proposal under consideration and the desire of all concerned to seek and find the proper solution of Florida's marketing problems.

That the growers of the state will back up the Fruitmen's Club and the various marketing agencies which have endorsed the plan and will readily enter into an agreement for the financing of the million dollar campaign, we firmly believe. If this is done with the same spirit of unanimity which characterized the Orlando meeting, the success of the plan is assured, and every citrus grower in the state will be benefited by the inauguration of this campaign and the adoption of Mr. Commander's suggestions.

CO-OPERATIVE CITRUS ADVERTISING

The Citrus Industry is whole-heartedly in favor of the co-operative advertising of Florida citrus fruits; that is, in the advertising of Florida citrus fruits by an organization embracing all factors, all elements and all interests involved in the industry—and for the benefit of the entire industry.

If the present plan to co-operatively advertise Florida citrus fruits is carried out along this line, there can be no doubt of its success nor of its benefit to the individual grower, no matter where he grows his fruit and no matter how nor where he sells it. But, to achieve the highest degree of success this policy must be strictly and literally adhered to. There must be in such advertising no reference to brand or trade-mark, no reference to particular grade or pack, no exploiting of specific varieties, no special emphasis of section or origin of the fruit.

The greatest benefit which the growers of Florida may hope to obtain from such an advertising campaign as that proposed must come through an appeal which will create an increas-

ed demand for citrus fruit. This must be the primary purpose of the campaign if the benefits are to be permanent and lasting. A million dollars a year spent with a view to increasing the desire, and through that desire increasing the demand for citrus fruit, will go far toward creating a market which will for all time take care of the increasing production of citrus fruits. A million dollars spent merely to increase the sale of citrus fruits from a given locality or a given state, without first of all creating an increased demand for the fruit itself, will afford only a temporary relief.

The ultimate consumer cares very little about the origin of the fruit he eats. He is concerned chiefly with its quality, its appearance and its appeal to his palate. If he is satisfied on these points, he does not stop to enquire particularly from which point of the compass the fruit comes. About the best evidence of this attitude on the part of the consumer is seen in the present very effective advertising being carried on by the banana interests. Of the many millions of people who daily eat bananas, probably not one in a thousand knows or cares where the banana he eats was grown. In a hazy sort of way, he thinks of bananas as growing in some tropical jungle—and he lets it go at that. What he wants is bananas, and so long as they come up to his standard of quality he is content. So far as he is concerned, they might be grown in Alaska, and he would still eat them. Recognizing this attitude of the consumer, the banana on the fruit itself. It aims simply to increase advertising in question makes its whole appeal the demand for and consumption of bananas.

In like manner, any co-operative advertising of citrus fruits must have for its primary object the increased consumption of citrus fruit through increased desire and demand for the fruit itself. This should be the first objective of co-operative advertising. Having created this increased demand through increased desire, the superior quality of Florida fruit, exploited through the same advertising channels, will assure the Florida growers their full share, and more, of the increased consumption.

Florida production of citrus fruits is increasing and will continue to increase indefinitely. Texas production is increasing rapidly. California production certainly is not decreasing. To provide markets for this increasing production, there must be created an increased demand for and consumption of ALL citrus fruit. It is, or should be, the primary object of any general advertising campaign to stimulate such increased demand.

Let us advertise Florida citrus fruits, sure; no fruits in the world better deserve extensive advertising or can better stand the test of publicity; but in doing this let us not overlook the fact that the primary object of such advertising, and the feature which will prove of greatest benefit to the grower, is the creation of increased demand for and consumption of citrus fruit regardless of its place of origin.

Remember, a starved tree can no more produce good fruit than can a starved cow produce rich milk. Moral—feed your trees with an abundant supply of good fertilizer.

Dusting Experiments in 1925

By W. W. Yothers

During 1925 several experiments were carried on to secure data as to the best and most economical form of sulphur to use for killing rust mites. For this purpose three different kinds of sulphur were used. A mixture of 92 per cent sulphur and 8 per cent hydrated lime was applied to one plot. The screen test according to the manufacturers was 200 or finer. The lime made this "roll" and it came out of the duster very rapidly and made a great cloud. Sublimed flowers of Sulphur was also used. This was a bulky material and held together, i. e., it did not roll as if hydrated lime was present. Flour of Sulphur or ground sulphur was used on another plot. This was a heavy material and did not occupy much more than 2-3 as much space as the Sublimed Flowers of Sulphur. It did not stick nor did it "roll" but enough came out to completely cover the trees. The Bureau of Chemistry gave the following screen test for the last two materials.

Through 170 mesh	
Through 150-170 mesh	
Through 100-150 mesh	
Through 65-100 mesh	
Through mesh coarser than 65	

The materials were applied with a large power duster and the dust did not pass through the fan chamber. In plots 1, 2 & 3, some effort was made to cut off the feed when a small tree or a vacant space was present. The feed was left at maximum capacity. In plot 4 the feed was cut down considerably and every effort was made to cut the dust off for vacant places and small trees. In plot 5 the feed was left wide open and no effort was made to save dust by cutting the feed off for vacant spaces or small trees.

The quantity and cost per tree is given in the following tables:

Plot	Material	Quan. lb s.	Tree spaces	Average amt. per tree	Cost per tree	Remarks
(1) 92 P. Ct. S. 8 P. Ct. lime	100	144	.7 lb.	1.925c (1)	Wide open	
(2) Flowers of sulphur	110	220	.5 lb.	1.700c (2)	" "	
(3) Flour of sulphur	100	156	.64 lb.	1.280c (3)	" "	
(4) " " "	100	239	.418 lb.	0.836c	Cut down	
(5) " " "	100	165	.606 lb.	1.210c	Wide open	

(1) - \$55.00 per ton.
(2) - \$68.00 per ton.
(3) - \$40.00 per ton.

The 92-8 mixture gave a good distribution and it come out too fast. In any extensive experimental work or commercial dusting the feed would of course be cut off so that much less material would be used. The examination of the foliage with a hand lens where Sublimed Flowers of Sulphur

was used showed that a good distribution was obtained. The same may be said of Flour of Sulphur. The kind of sulphur could readily be told by examination with a hand lens.

In analyzing the cost of material per tree one at once stirs up a hornets nest regardless of what statements are made. It is well however to say that almost 1-2 lb. of the 92-8 material would amount to 1.28c the cost of the Four of Sulphur used to dust a tree. It is more than likely enough for an average tree but I doubt if much less than that would be satisfactory. Formerly I always thought one should use almost a

with the hand lens to determine the presence of sulphur. There was much more present than would ordinarily be expected. The large particles of Flour of Sulphur were readily detected. Living mites were present on all plots on June 11 or after 24 hours. This is the first time we had ever seen mites 24 hours after dusting. On June 14 a count of rust mites was made using an area 1-2 x 1-2 inch on the top and lower side of the foliage and one on the fruit. Seventy-five squares were counted for each plot,—1-3 on the upper side, 1-3 on the lower and 1-3 on the fruit. The results are given below:

Material	Mites present per 75 $\frac{1}{2} \times \frac{1}{2}$ inch squares.	Maximum No. on one square ($\frac{1}{2} \times \frac{1}{2}$ in.)	
		15	250 estimated
92 - 8 Flowers	39	15	
Flour (full capacity)	233	250 estimated	
" (less than full capacity)	2	1	
Check.	151	100 estimated	
	347	100 estimated	

pound. Unquestionably one can kill as many mites for his money using the Flour of Sulphur as with any material and this has always been

Flowers:-	Flour:-
88.47 per cent	56.48 per cent
11.35 per cent	10.90 per cent
3.60 per cent	14.44 per cent
1.28 per cent	12.39 per cent
0.80 per cent	5.84 per cent

frowned upon in many quarters.

Results on Rust Mites

Owing to most unfavorable weather conditions at the time and following the dusting, the results were the most unsatisfactory we ever obtained ourselves or to our knowledge was ever obtained by anyone else. The temperature was between 80° to 85° F. and to obtain the best results it should have been from 90° to 95° F. Such a high temperature produces rapid oxidation which kills the mites. The rains also were abundant. Five hours after the dusting one-fourth inch fell. The second day seven-sixteenths inch fell and showers fell dur-

While the table indicates that one material might be more efficient than another in reality I do not suppose that such was the case. If the maximum number found in one square be eliminated there would not be such a great difference. These particular areas may not have been reached and owing to low temperature and rain the sulphur gas did not reach them. It should be carefully noticed however that the coarsest material killed rust mites. This experiment shows as has been shown many times before that 100 per cent kill should not be expected if rains fall before the expiration of the third day.

"BLUE GOOSE" HOUSE ORGAN

The American Fruit Growers Inc. at Orlando has established a monthly house organ known as "The Blue Goose News." The first number was issued April 1 and the publication will be mailed free to all interested growers. The Blue Goose News is edited by the service department of The American Fruit Growers Inc. and is devoted to the dissemination of news of that organization. It is a neat little publication and filled with "Blue Goose" news of interest.

Absence of occupation is not rest,
A mind quite vacant is a mind distressed.—Cowper.

It is expected that \$33,500,000 will be spent for good roads in Florida during 1926.

ing the third day. The rain gauge gave 9-64 inches on the morning of the fourth day. Most of this fell the night of the third day. On June 16 or six days after the dusting 9-16 inches fell. On June 12 after about 3-4 of an inch of rain had fallen an examination was made of the foliage

The Production of Quality Fruit

By J. G. Grossenbacher

In a section where a crop is well adapted to the soil and climatic diversity of methods in caring for the crop is usually more pronounced than it is in a region where climatic or soil factors are such as to circumscribe such diversity by failures.

In the citrus belt of Florida one finds most diverse methods in caring for or handling of groves. Newcomers are astounded at the difference in the advice they get from their neighbors regarding the proper and most profitable handling of the newly acquired or newly set grove. The diversity of this advice is often so great as to almost discourage a beginner.

One tells him to prune fully and thoroughly each season, being sure to let sunlight to the interior of trees and another to cut out only the dead wood. A third neighbor comes along and tells him that both the other methods are wrong and that he must remove not only the dead wood but also all weak or interfering twigs and branches inside the tree.

In regard to pest control a similar diversity meets the newcomer. One tells him spraying never pays and another that he should spray or dust at least six or eight times per season. A third neighbor may be found that advises him to spray or use control measures from two to four times on each crop, depending upon whether or not pests are present in sufficient numbers to warrant taking action.

When it comes to fertilizing the grove he meets a like dissimilarity of opinion. He is advised to make but one application and to use only inorganic ammonia to avoid diseases, while another says that he must fertilize three times per year and use both organic and inorganic sources of ammonia to avoid trouble and keep up a good yield and tree vigor. One suggests fertilizer be spread in a narrow circle about trees and the other to spread it as widely as the roots extend.

He is also told that rains are frequent enough in Florida that irrigation never pays, while at the same time others show him that about two years in five an adequate irrigation system pays enormous dividends.

When he comes to the item of cultivating his grove he finds equally di-

verse practices and he necessarily gets to the point where he is ready to say that the growers of citrus fruits in Florida are simply at sea and know nothing about their business.

As a matter of fact, our soil climatic conditions are such that a citrus tree given half a chance to make good pays a fair profit on most or all of this diversity in methods of handling.

During the past four or five years however, owing to the fact that prices have been more and more discriminative on the matter of fruit quality and profit per acre of grove, there has been a more marked tendency to uniformity of handling bearing groves, particularly in regard to pruning, cultivation, and fertilization. But the spray program has been badly deranged by the appearance of the aphis. Since most of the methods suggested for the control of that pest have proved both expensive and of little real practical worth many growers have become discouraged and let other pests go uncontrolled. The results have been rather bad in that many groves are below normal and have an excess of harmful pests.

In the matter of cultivation a marked change is noticed. It is found that the less frequently cultivated groves produce the better grade of fruit, both as regards texture and juice content.

In former years I have given the matter of grove cultivation considerable attention and I feel sure that the subject can not be stressed too strongly. Since first bringing up this subject in the Citrus Leaf and following the full discussion devoted to cultivation at the Tampa meeting of the Horticultural Society in 1924, there has appeared a marked tendency among growers to cut down on the cultivation of a bearing grove.

It is generally understood that frequent cultivation is important in the development of a young grove and in the rejuvenation of an old grove. Stirring the soil promotes growth and vigor in trees and thus makes a beautiful grove. However, once a grove has attained productive size and vigor this tree-growing method con-

tinued usually leads to the development of rather coarse fruit with tender rind and indifferent juice content.

In going over hammock groves where much less tillage is given ridge growers are amazed at the extra fine quality of the fruit. It is also found that the fruit on back-yard trees on high-pine land has similar qualities.

It seems that the liberal use of fertilizer along with very thorough cultivation stimulates the growth too much on high-pine groves and thus results in the development of coarse fruit with rather insipid or poor grade juice content. The liberal use of nitrate of soda in the fertilizer in such cases improves the juice very greatly, but appears to have but little effect upon the rind, except when used too liberally results in ammoniation.

Cutting down on the cultivation has been shown to improve the fruit quality produced on high-pine groves, but how much reduction is most profitable must be determined by test and balanced according to the amount and kind of fertilizer used on such groves.

According to my observation the advice given by hammock growers to cut out all cultivation is not practical for high-pine groves because it is too difficult to maintain growth and vigor of trees. However, it seems that confining tillage chiefly to late February and March, and then working in the mid-summer and fall applications of fertilizer usually results in the development of sufficient growth to maintain trees in good vigor and at the same time improves the quality of the fruit above that grown by hightension tillage.

The amount of fertilizer should usually be increased when cultivation is diminished so as to maintain tree growth and vigor.

In case the trees in such a grove are large it may prove necessary to provide irrigation if cultivation during dry periods is stopped. When a convenient source of water is at hand an irrigation system pays good dividends, especially if provision is also made for the convenience of securing water to do the spraying.

Milk is a valuable source of minerals to build bone and teeth.

*Citrus fruit industry to have
Advertising*

Sixteen

THE CITRUS INDUSTRY

April, 1926

Will Organize to Advertise Florida Fruits

Probabilities that Florida citrus interests will perfect an effective organization for the inauguration of national advertising campaign of Florida citrus fruits were given a big boost at the meeting of the Fruitmen's Club in Orlando on the night of March 22. At this meeting, C. C. Commander, general manager of the Florida Citrus Exchange, presented to the Club his proposal for the organization of a corporation to co-operatively advertise Florida citrus fruits, with a provision that of fund of not less than \$1,000,000 be raised for the purpose.

Mr. Commander had previously mailed an outline of his proposal to each member of the Club and to other citrus interests of the state. When the proposal was submitted formally to the Fruitmen's Club at the Orlando meeting it met with the whole-hearted and unanimous approval of every member present, and with very few minor changes was accepted by the Club as embracing the views of that body. Practically every representative of the big citrus interests at the meeting, including J. C. Chase, Chas. Fugazzi, S. J. Sligh, A. J. Nye, H. E. Gettler, Chas. Oyler, Wm. Coble, Barney Kilgore, W. H. Mouser, H. A. Ward, P. E. Godfrey, H. C. Case and others gave public expression of their approval of Mr. Commander's plan. Other members, unable to attend the meeting, gave their approval by wire.

Chairman V. B. Newton of the Fruitmen's Club, after the adoption of the Commander plan, appointed a committee consisting of L. B. Skinner, chairman, C. C. Commander, F. L. Skelly, J. C. Chase, W. H. Mouser, Lawrence Gentile and Chas. Fugazzi to work out plans for the formal perfection of the organization proposed.

An organization entirely separate from the Fruitmen's Club is to be incorporated to handle the proposed advertising campaign.

Approximately 80 per cent of the Florida crop was represented at the meeting through sales organizations and growers. Mr. Commander's plan calls for at least seventy-five per cent approval before undertaking the plan, and this percentage seems to be more than assured.

The plan as presented by Mr. Com-

mander and approved by the Club follows:

The Motion

Representing the Florida Citrus Exchange, a member of the Fruitmen's Club of Florida, my motion to that body in its second March meeting will include the following factors: that

1. An organization be created and incorporated under the laws of Florida for the sole purpose of the financing, formation and direction of publicity and consumer advertising of Florida Citrus Fruits.

2. All memberships in that organization be equally available to all citrus shippers of the state.

3. Finances for the expressed purposes of the organization be derived by means of a per box retain, the amount of which may be varied from season to season.

4. Voting power in the organization be on a per box basis; that executive power on matters of routine business be vested in a Board of Governors.

5. A subsidiary company be formed for the purpose of developing European markets for the overflow of Florida fruit; that this subsidiary company will include the development and direction of a foreign sales organization to handle fruit furnished by all members on a pro-rata basis.

6. The functioning of this organization will in no way control sales policies of individual shippers or organizations, offer sales assistance, inhibit individual brand advertising or control prices; that its purpose be limited to the direction of publicity.

7. A committee of seven members of the Fruitman's Club be selected to study this proposal as generalized above and discussed in detail on succeeding pages, and draft a report to be presented to this body for action at its next regular meeting.

The Plan

The citrus growers and shippers of Florida took a serious financial whipping in the season of 1922-1923. Why? The answer is not difficult and is generally agreed upon—the citrus marketing machinery of the state was not competent to sell the volume of fruit in the state at a profit to the grower. Markets were undeveloped; sufficient consumer demand was lacking.

Is the industry to enter another season, one which has every possibility of equaling or exceeding the crop volume of that fatal year, without definitely correcting its mistake, and, profiting by this experience, forestall disaster?

Prospective Crop Heavy

While it is undoubtedly too early to formulate an accurate estimate of next season's volume, all close observers of the situation agree that there is every probability that Florida's citrus groves will produce one of the largest, if not the largest, crop in its history.

Enter practically any fruit producing section of the state, and you will see more bloom than has been on our trees in years. Barring any climatic catastrophe, we may safely assume that this bloom will mature into at least a normal crop.

There has been some considerable discussion in the state press concerning the loss in volume which will be caused by acreage reductions in favor of subdivisions. Without discussing this in detail, I believe these reports tend to considerable exaggeration particularly in view of the fact that such reductions are compensated by the thousands of acres of younger groves which are now coming into bearing.

Nevertheless, whether our citrus crop is normal or larger, we will face heavy determined competition for a profitable place in America's fruit markets next season.

California shippers can reasonably expect a normal volume. Texas grapefruit is rapidly becoming a factor in mid-southern and mid-western markets. Porto Rico, supplying the Northeast, faces no shrinkage in tonnage.

Further, the crop volumes of perishables other than citrus are important factors of competition which cannot be disregarded. There are now more apples in storage than the country will consume at the present rate during the next twelve months. There is no legitimate hope for a reduction of other fruit and truck productions which tend to cut into our markets.

Competitive Fruit Sections Out-Merchandising Florida

In addition to the worthy example afforded us, and viewing the matter in the light of certain strenuous com-

THE CITRUS INDUSTRY

petition, we must not overlook the various combinations being effected in other than citrus lines for the purpose of widening distribution and developing consumer demand.

The most recent of these instances may be cited in the banana industry. The United Fruit Company and its associated banana shippers have combined efforts to increase the distribution and consumption of their product in America.

The work of the Associated Shippers of Hawaiian Pineapple needs little introduction. Here is a fruit, foreign to America in recognizable commercial volume, which is today demanding constantly increasing attention from America's housewives—and at the expense, at least in part, of Florida's Citrus Fruits.

Perhaps our most severe competition is found in California citrus fruits. This is true, not because of a better quality fruit or favorable proximity to markets. Indeed these factors are decidedly in our favor. Rather it is because of the excellent job of consumer development work they are doing.

Appended to this discussion is a photostat copy of a California advertisement which demands attention at this time. It is an illustration of how our California competitors are molding public opinion. In doing so they are, without dispute from Florida other than in a small way thru Exchange advertising, misrepresenting facts.

This phase of differentiation between California and Florida oranges was carefully examined before we started our "1/4 more Juice in Florida Fruit" advertising. These facts were found to be in favor of Florida, as is illustrated in a summary of our laboratory's report elsewhere included.

In addition to a heavy crop, citrus shippers of Florida face a constantly increasing wave of competitive merchandising effort. Some is legitimate, some glaringly false; all must be answered if we are to hold any semblance of economic stability in the industry.

Gentlemen, if we are to avoid a repetition of the season of 1922-1923 during the ensuing shipping period, it is imperative that we create some means of financing, preparing and directing consumer publicity on Florida Citrus Fruits.

We are faced with a tremendous job. It must be done if we are to avert impending disaster.

Incorporate Publicity Organization

To my mind, the most effective means by which we may accomplish this end is through the incorporation

of the Fruitman's Club for the purpose of financing and managing that publicity effort.

Memberships in this organization would be equally available to all commercial shippers. Voting power of the organization logically must be on a per box basis, determined by official records of shipments for the preceding season. Executive power to act on all matters of routine business should be vested in a Board of Governors. These Governors would be elected by the stockholders or members in the same manner which maintains in any corporation or similar organization.

In order to finance the work, let each member pay into the organization a certain retain per box on every box of fruit that he ships—this money to be paid on about the 15th of each month for the preceding month's shipments. The amount of this retain should be fixed each season—made variable according to market needs and crop conditions.

Let it be distinctly agreed that the money derived on this basis is to be used for the purpose of advertising and merchandising Florida Citrus Fruits only. The advertising would mention no trademarks or brands. It would advertise Florida Citrus, stressing the many consumer sales feature which apply to our fruits—and ours alone.

Minimum of \$1,000,000 Necessary

I make no recommendations of the size of the per box retain for the derivation of revenue. I do maintain, however, that it will take not a penny less than a million dollars spent in this work to make progress against the highly developed, intensely competitive and thoroughly dangerous factors we face in our future marketing work. This is considerably under what California will spend, and is below the usual percentage of gross sales spent on advertising by most product manufacturers.

While it is the proper function of advertising experts to make definite recommendations in this respect, I am convinced that we cannot hope for complete success if we attempt to operate on less.

This organization would have nothing to do with the control of sales or the operation of each individual trademark. Each could advertise these as much as he likes and transact his business as he desires, only conforming to specifications of grading, and helping maintain proper distribution of fruit.

I believe that to obtain most satisfactory results and maintain a proper price level it would be advisable for this body to adopt a standard of

commercial cars, together with proper discounts for off sizes. This would apply, of course, to both first and second grade fruit. In my opinion it should conform to Government specifications, but not necessarily have Government inspection.

Citrus Market Reports

My plan includes the provision of full daily publicity on citrus markets and the working of this organization and its members.

This phase of the activity of the organization is important in that some considerable protection of prices, which may be discussed in regular meetings of the body, would be afforded. It offers an opportunity to bring before all operators and growers in the state, sales practices which have time and again broken prices far below a level at which fruit could readily be moved.

Develop European Markets

In addition to the features outlined above I believe it is of vital importance that we take effective steps to develop and exploit European markets for Florida fruit.

You are undoubtedly aware of the manner in which producers in this country use these markets for turnover of surplus merchandise in order to maintain in this country a volume of supply in direct proportion to demand with consequent favorable prices. These goods are often sold in European markets at a lower price than maintains in this country.

This same plan can be accomplished for Florida Citrus.

To this end, I recommend the formation of a "Florida Citrus Export Company" as a firm subsidiary to the main publicity organization. Under the existing Federal laws, this company can be made a complete monopoly handling Florida citrus fruit. I further suggest that each member contribute fruit to be handled by this company in proportion to his holdings, the total volume to be decided by this body.

This entire export fruit volume should be thrown into one pool. It will receive advertising support from the main publicity organization, of course.

The development of these markets is going to take some time and cost some money. Yet it is essential that we provide a safe outlet for a surplus which may be dangerous to domestic markets. We must expect to buy considerable experience before we are completely successful in the matter of direct returns from this work.

Product Utterly Susceptible

There can be no doubt that Florida citrus fruit, *per se*, is a most ad-

Continued on page 24

The State Horticultural Society

Official Notice of Horticultural Meeting

By Bayard F. Floyd, Secretary

The Thirty-ninth Annual Meeting of the Florida State Horticultural Society meets in Cocoa, beginning Tuesday evening, May 4th, and continuing to Friday, May 7th. Every member is expected to be present and in his seat at 8:00 P. M. on Tuesday, May 4th when President Skinner with his gavel calls the meeting to order. A surprise is in store for those who are there at that time. A speaker of National fame, whose name we are not ready to announce yet, is going to give the opening address. In fact, there are going to be many surprises and good things during the meeting for the faithful who come, and you, Mr. Member, cannot afford to miss them.

The program will be published in the State papers just previous to the meeting and if you cannot be there through the meetings, pick out a day that is of most interest to you and come.

How to Get There

Most of the members know where Cocoa is, but if you are a newcomer to the State and do not know, it is on the East Coast, almost due east from Orlando. It is located on the Indian River in the heart of the section where the famous Indian River oranges are grown. As you read your market reports and see where Indian River pineapples are bringing big prices, whereas you have not been getting much for yours, doesn't the question come to your mind, "How do they do it?" This is your opportunity to find out. Come see their groves and ride over their beautiful drives, up and down the Indian River and on Merritts Island, which is across the River.

If you live on the lower East Coast, follow the Dixie Highway straight north. If you live in the interior or on the West Coast, go to Orlando and take the Cheney Highway to Indian River City and from there south to the town that has "all that Florida has to offer". The roads are all paved and nice and wide. Come on; President Skinner wants to see you there and have a nice visit with you.

The trip is well worth the time and expense on account of the friends you will meet there. By swapping stories and experiences with them as you sit in the big easy chairs of the

New Indian River Hotel lobby, you are bound to get some good ideas that are well worth while to you in your work, whether you are a citrus grower, avocado grower or just growing a few flowers and shrubs in your back yard because you love them. Bring the wife and all the family. Miss Flavia Gleason, the State Home Demonstration Leader, has something to tell you that will be to your interest.

The Rose Show

In addition, if we can get together enough roses, we are going to have a rose show. We think Professor W. F. Floyd and Mrs. E. L. Lord in Gainesville will bring some nice specimens, and Mr. N. A. Reasoner of Oneco has promised to help us out. Mr. Carruthers of Orlando, Jimmie Donn of Miami, Mr. Griffing over at McClenney, Mr. Hume at Glen St. Mary and Mr. Whipp at Jacksonville should help us out. There is to be some real competition. Premiums will be offered in three classes: First, for amateurs, second, for private gardens only; and third, open class for any member, including the commercial growers. Roses grown outside the State are barred.

While getting ready to come to the meeting, pack up a half dozen or more of your best roses and bring them in and enter them in the exhibit. You may win a prize. If not, you will have had the satisfaction of showing a spirit of cooperation. Remember, a rose show without exhibitors is no rose show at all. Bring your roses and come on. If you can't come, send them to the Secretary at Cocoa.

The Rose Show will start on Tuesday night and continue through Wednesday, and will be staged in the New Indian River Hotel lobby.

The Program

The program is still in the making. Citrus aphids, Melanose and troubles will be discussed and some new information concerning these and their control will be forthcoming.

If your grove is on sandy land, it probably needs more humus and organic matter. How best to get this and how to make your trees behave better will be told by a number of speakers who are authorities.

If the crop this fall is at all pro-

portionate to the bloom, we are going to have a real marketing problem. Some phases of this subject will come up for discussion. Extending the bearing period of tangerines, soil classification, growing citrus on the muck, pruning and other phases of citrus growing will be told about.

Did you know California recently put one over on us? If not, we have a speaker who will tell you how a maturity standard for avocados affects us. Soils for avocados, varieties, etc., are other avocado subjects.

This is to be more or less of a rose meeting. Its culture will be talked about. If you are interested in growing them, you should hear these papers. However, other ornamental plants will not be neglected. All of this is for the man or woman who wishes to grow them in their flower garden and to have beautiful home surroundings.

Mangoes and other sub-tropical fruits, pecans, satsumas, grapes, blueberries, and other Florida fruits will each have its inning. Come and listen and add your bit to the discussion. It is not what anyone knows, but what we all know that counts.

Headquarters

The headquarters will be at the New Indian River Hotel. The other hotels are the Knox Hotel, the Cocoa House and the Brevard Hotel. All have guaranteed extremely reasonable rates, and there will be plenty of room for everybody. If there are any who prefer to have rooms in private homes, they can secure these by writing to Mr. John Fiske, Secretary Chamber of Commerce at Cocoa, who will make these reservations. Hotel reservations should be made with the hotels direct.

The people in Cocoa are strong for this meeting and are going to do their best to make your stay an enjoyable one.

Place of Meeting

The place of meeting in Cocoa has not yet been decided, but you will have no trouble in finding out about it when you get there.

Annual Dues

Sorry to mention it, but we need some money. Send your \$2.00 for annual dues to W. W. Yothers, Asst. Secretary, at Box 491, Orlando, Florida, at once before you forget it. If you have not been a member before

April, 1926

and wish to join the Society send \$2.00 for your annual dues for 1926 and a letter stating that you wish to become a member. If you cannot attend the meeting, you will want the Proceedings that contains all the papers read there and tells all about the meeting.

Perennial Dues

If you don't want to be bothered by paying your dues annually, why don't you send Mr. Yother \$10.00. This will pay your annual dues five years in advance and makes you a Perennial Member.

Life Membership

Better yet, send him \$25.00 and become a Life Member;

Patron Membership

or, if you want to do the Society a good turn, send him \$100.00 and become a Patron Member. This and the Life Membership fees are invested in United States bonds and only the interest from these is used by the Society in paying its current expenses.

MEET US IN COCOA

P. S. Have you forgotten about Citrus Canker, the Black Fly, the Mediterranean Fruit Fly and some other pests that you may wake up some fine morning and find in your grove? If so, you better wake up and come to Cocoa and give a little heed to what Wilmon Newell may have to say to you.

New Members

During the last year many new people have come into the State to make their homes. Some of these have settled in each community. Many are interested in Florida horticulture. In order that they may get some idea of the nature of the Horticultural Society program, the table of contents of the 1925 Proceedings is herewith reprinted. After reading this news letter, hand it to some one of these new people, tell him about the Society and invite him to join.

Contents of 1925 Proceedings

The Personality Phase of the Food Production Problem, L. H. Bailey.
The Past Season's Results with Crotonaria as a cover Crop and Some Plans for Future Work, W. E. Stokes
Cover Crops on High Pine Soil, F. M. O'Byrne
Cover Crops and Soil Building in the Citrus Groves, W. L. Drew
Observations on Citrus Wilt, Arthur Rhoades
Report on Soil Moisture Conditions in Brevard County, Florida, Albert O. Kay
Economy in Citrus Fruit Production, E. F. DeBusk
Economics in the Growing of Citrus Fruits, J. G. Atherton

THE CITRUS INDUSTRY

- Economics in the Growing of Citrus Fruits, A. C. Nichols
Plant Propagation, W. L. Floyd
The Grafting of Plants, J. W. Barney
Fake Fertilizers, R. E. Rose
The Children's Code Commission of the State of Florida, Elizabeth Skinner
The Clonal Variety in Horticulture, A. B. Stout
The Flower Behavior of Avocados with Special Reference to Interplanting, A. B. Stout and E. M. Savage
Growing Figs in Florida, Harold Mowry
The Maturity of Citrus Fruits from a Legal Point of View, R. W. Ruprecht
Maturity of Citrus Fruits from a Legal Point of View, Seth S. Walker
The Borax Treatment of Citrus Fruits for Prevention of Decay, H. R. Fulton
Varietal Names and Their Control, E. L. Lord
Report of Committee on Nomenclature, E. L. Lord, Chairman
Code of Fruit Nomenclature
Activities of Growers and Shippers League of Florida, J. Curtis Robinson

Nineteen

- Controlling the Citrus Aphid, J. R. Watson
Notes on the Life History of the Citrus Aphid, A. H. Beyer
Preliminary Report on Insecticides for Controlling Citrus Aphid, W. W. Yother and O. C. McBride
The Control of the Citrus Aphid by Its Natural Enemies, F. R. Cole
Report on General Aphid Situation, Wilmon Newell
Observations on Citrus Aphid Control at Davie Florida, A. C. Brown
Citrus Aphid Situation, Dr. E. M. Gilbert
Citrus Aphid, E. W. Berger
Town and County Beautification, John R. Van Kleek
Experiments on Growing California Grapes in Florida, Paul Hawkins
A System of State Parks, Elizabeth Skinner
Blackberries in Florida, H. G. Gardner
Grape Problems in Florida, E. E. Truskett
Florida Making a Good Beginning with Blueberries, H. G. Clayton

Corn doesn't make a very good money crop for the Florida farmer, but it does make a good feed crop.



USE
"BLACK LEAF 40"

**It gives you
Extra**

Insurance Against Aphids

Take advantage of this 2-fold control. When you spray with "Black Leaf 40" you kill Aphids and Thrips, not only by direct contact (or hitting) but also because of the "gassing" effects of the volatile Nicotine fumes which arise through the trees. Likewise, when you dust with Nicotine Dust, insects are killed by actual contact of the dust with their bodies and also by the powerful nicotine gas.

Ask Your Experiment Station

Tobacco By-Products & Chemical Corp.
Incorporated
Louisville, Ky.

Kills
Aphids

Black Leaf 40
40% Nicotine

CITRUS COMMENTS

BY

**R. E. Lenfest, Manager Horticultural Department
Orange County Citrus Sub-Exchange, Orlando**

Young Trees

All young trees should have been unbanked by this time and the spring application of fertilizer applied. In removing the banks the soil should, as a rule be pulled away far enough to bring the level down to the crown roots. If this was not done when the trees were unbanked it can be done when the trees are hoed. As soon as the young trees are unbanked and fertilized the regular cultivation should begin. An acme harrow or some such tool that does shallow work should be used. The tree rows may be worked both ways or if it is desired to let the cover crop grow in one middle the rows can be worked one way. If the trees were worked one way last year it would be a good plan to go across the other way this year so as to allow the cover crop to get a chance to grow between the trees in the row. If the cultivation is kept up in the same direction for several years the strip is liable to become so lacking in humus that it will not grow a good cover crop. When the grove is long one way and narrow the other the cultivation is apt to be done the long way too much of the time as it is much easier to work out long rows than short ones as there is less turning to be done.

After the spring cultivation has been begun the rows should be worked every ten days or two weeks throughout the summer. A variation of this schedule may be made by letting the cover crop grow for an extra two weeks during June and early July and then resume cultivation and keep it going during the remainder of the summer. This is a good plan in groves where the humus is somewhat lacking as it allows a little to be added to the cultivated strip as well as to the uncultivated middles. Of course it requires a little more effort to work down the light growth of cover crop and get the rows in easy working shape but it would seem to be worth the extra effort. If the cultivation does not keep the grass and weeds away from the trees it should be removed with the hoe. Sometimes

growers prefer to hoe their young trees instead of cultivating. If the hoeing is done in such a way that it is really a shallow cultivation covering as much space around the tree as the acme would do and done as often the results should be satisfactory. However, a good deal of the hoeing is of the flat weeding type and the young trees instead of getting cultivated have the space around them kept more or less free from grass and the ground becomes somewhat packed. There is considerable difference between flat hoeing and honest to goodness hoeing with the idea of doing some shallow cultivation as well as removing the grass.

Citrus Aphids

One morning the aphids came in for breakfast and now they seem to be settled down to business in earnest. Fortunately in many groves the orange growth and bloom was so well advanced that they will not do a great deal of harm. Some of the young trees also were far enough ahead of them to get by in pretty good shape. There are, however, some groves that were slower in putting out growth and bloom and in these it will probably pay to check the work of the aphids. There are a number of methods for checking the aphids. Several of the standard oil emulsions will kill large numbers of aphids if a good job of spraying is done. However, the use of oil emulsions alone when there is new growth or young fruit on the trees is not always safe. The new material Derrisol and Black leaf 40 are about the two best contact insecticides. The Black leaf 40 requires the use of several pounds of fish oil soap in each tank to give the required spread to the solution. The Derrisol spreads very well without the use of soap as it is used just as it comes from the container. Lime Sulphur may be mixed with these two contact insecticides and this mixture will kill the rust mites and red spiders as well as the aphids.

On large bearing trees the use of dust and power duster is the best and quickest way of checking the

aphids. The main drawback to this method is that it is hard to find a time that is not too windy. The nicotine-sulphate-lime dust is a good one to use and should be of full 3 per cent strength. Be sure that it is full strength and guaranteed on the tag. This is important as there was a good deal of dust sold last year that carried only a very small amount of actual nicotine and the growers did not get any results from their work.

The Entomologists of the State Plant Board and the Experiment Station have worked out a plan that enable the grower to dust fair sized trees even when there is a breeze blowing. They describe it as resembling a prairie schooner wagon cover. The top and side next the power duster are fastened on frames while the back flap hangs loose to allow it to drag over the trees as the machine moves along. A window in the tent opposite the operator enables him to see to dust the tree. Since the outfit must pass close to the tree the discharge pipe should be cut off to a length of twelve to fourteen inches. They also make the suggestion that this device will be useful not only for dusting for aphids but for rust mites as well. Be sure to keep a very close watch of the tangerines and kings as they are late in blooming and the aphids may do a great deal of damage to the bloom.

Citrus Scab

Indications are that it will pay to keep fruit free from scab in order to get a better price next shipping season. Since the grapefruit seems to be blooming a little later than the oranges there is still time to check some if not a large part of the scab. Probably the best plan to follow where there is much scab would be to spray with lime sulphur now at a strength of about 1 to 40 and then spray them again the last of April or by the 5th of May with Bordeaux Oil. This last spraying will also help check the melanose. The above is the line up for the grapefruit. To check the melanose on the oranges use home made bordeaux oil during

Continued on page 24

Kill Aphids In The Curled Leaves



Fumigate With
CYANOGEN
REG. U.S. PAT. OFF.
CITRUS DUST

UNLESS you can reach the citrus aphid in the curled leaves of the young growth, you will not get a 100% kill. Fumigation with Cyanogas Citrus Dust under tents is the only thoroughly effective method of killing the aphid.

Cyanogas Citrus Dust is a combination of Cyanogas and Sulphur which gives off hydrocyanic acid gas when exposed to air. The gas penetrates the curled leaves where ordinary contact poisons cannot reach and kills the aphid instantly. A few puffs to each tree with a Cyanogas Knapsack Duster will do it, if the tent is allowed to remain

on the tree for four minutes. Cyanogas Citrus Dust is endorsed by State authorities for fumigation against citrus insects in Florida. Do not fail to investigate this remarkable insecticide.

Demonstrations are now being held in the Florida Citrus Belt. Write us for the date and place of the one to be held in your neighborhood. Tell us about your problems; our entomologists will be glad to discuss them with you and tell you how you can use Cyanogas Citrus Dust for profitable results.

Ask for free leaflet 223, which gives full information.

AMERICAN CYANAMID SALES COMPANY

Incorporated

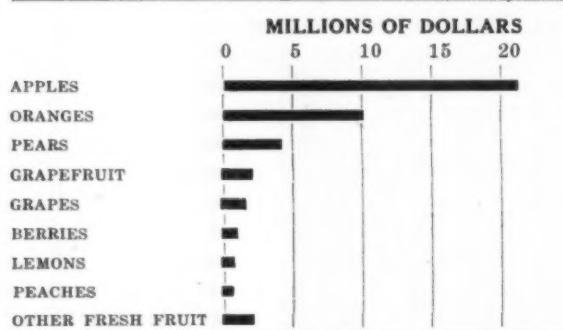
239 Bass Arcade Bldg.
Orlando, Fla.

511 Fifth Avenue
New York, N. Y.

Fresh Fruit Exports of United States In 1925

By D. J. Moriarty, Foodstuffs Division, Department of Commerce

United States exports of fresh fruits in 1925, had a total value of \$42,220,582 as against a total value of \$41,316,226 in 1924—an increase of \$904,316. Our apple exports yielded \$21,063,084, oranges \$9,853,152, pears \$4,125,450, grapefruit \$1,505,579, grapes \$1,-428,969, berries \$959,695, lemons \$888,649, peaches \$733,659, and other fresh fruits \$1,662,345. The following chart shows the relative position of the various fruit exports in 1925.



United States exports of fresh fruits for 1925, by values

Production and Exportation of Oranges

Over 95 per cent of United States oranges are grown in California and Florida, and the remainder in Alabama, Arizona, Louisiana, Mississippi, and Texas. A table recently published by the Department of Agriculture credits California with 20,400,000 boxes of oranges picked in 1925, as against 18,100,000 boxes picked in 1924; while Florida pickings in 1925 amounted to 14,100,000 boxes, as against the same amount in 1924.

United States exports of oranges in 1925 totaled 1,980,680 boxes (value \$9,853,152), as against 2,564,043 boxes (value \$8,697,097) in 1924—a decrease of 583,363 boxes. Our orange exports averaged 1,995,770 boxes yearly from 1920 to 1924.

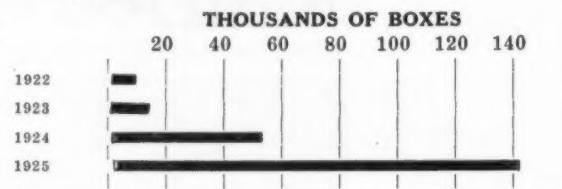
Canada Our Leading Orange Market in 1925

Other Buyers

Canada was our principal market for oranges in 1925, taking 1,831,380 boxes (92.4 per cent). Canada was also our largest market for oranges in 1920-1924, taking around 1,800,000 boxes (over 90 per cent) a year. Other oranges markets in 1925 were the United Kingdom (31,327 boxes), the Philippines (31,219 boxes), China (29,854 boxes), Cuba (15,847 boxes), Newfoundland and Labrador (12,773 boxes) and Mexico (10,053 boxes). Smaller quantities were taken by Bermuda, Peru, Azores and Maderia Islands, Panama, Japan, the Netherlands, Australia, Straits Settlement and Virgin Islands. Of these countries, China, Azores and Madeira Islands, Panama, and Straits Settlement, increased their imports in 1925, while the other countries mentioned took less.

Grapefruit Production and Exportation

Practically all the grapefruit grown in the United States is produced in Florida, although California, Arizona, Mississippi, and Texas produce small amounts.



United States exports of grapefruit to United Kingdom 1922-1925

The Department of Agriculture credits Florida with 8,200,000 boxes of grapefruit picked in 1925 as against 10,500,000 boxes picked in 1924.

United States exports of grapefruit in 1925 were 446,881 boxes (value \$1,505,579), as against 312,583 boxes (value \$876,028) in 1924—an increase of 134,298 boxes. This increase in exports is due largely to larger shipments to the United Kingdom, as illustrated in the above chart.

Grapefruit Exports, with Percentage to Canada and United Kingdom

The following table shows total exports of grapefruit from the United States for 1922-1925, also exports to Canada and the United Kingdom, with percentages taken by each.

Years	Exports of Grapefruit from United States					
	Total	To Canada	To United Kingdom			
1925	446,881	\$1,505,579	280,830	63.0	141,300	31.7
1924	312,583	876,028	249,097	80.0	47,720	15.4
1923	281,406	854,881	255,182	91.1	15,196	5.4
1922	223,917	757,214	207,238	92.5	10,088	4.5

* 1925 figures are preliminary and subject to revision.

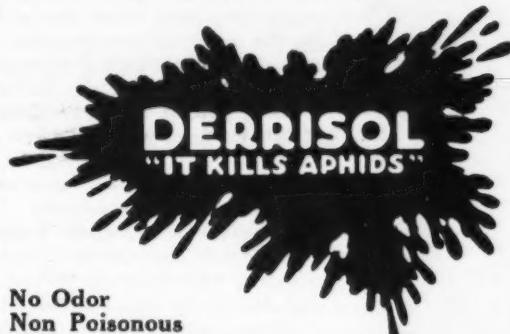
It can be seen from the preceding table that Canada is our principal foreign market for grapefruit, with the United Kingdom second. Smaller markets for these exports in 1925 were Germany, France, Newfoundland and Labrador, China, the Philippines, Bermuda, Argentina, Venezuela, and the Straits Settlement, each of which took over 500 boxes.

Production and Exports of Lemons

Practically all lemons produced in the United States come from California. According to the Department of Agriculture California is credited with 6,000,000 boxes of lemons picked in 1925, as against 5,125,000 boxes picked in 1924—an increase of 875,000 boxes.

United States exports of lemons in 1925 were 161,649 boxes (value \$888,649), as against 228,494 boxes (value \$898,373)—a decrease of 66,845 boxes. In 1925 the United States also imported 1,384,857 boxes of lemons (Value \$2,679,042), while in the period 1922-1924 our imports of lemons averaged 1,126,327 boxes a year. Practically all of our imported lemons are from Italy.

Canada is our principal market for lemons, taking 127,496 boxes (79.5 per cent) in 1925. Smaller markets for lemons in 1925 were China, which took 13,057 boxes (8 per cent); Japan, 7,330 boxes (4.5 per cent), Cuba, Panama, Bermuda, and Mexico each took over 500 boxes. While Canada took 60,533 boxes less in 1925 than in 1924, China, Japan, the Philippines, Cuba, and Panama increased their purchases of our lemons.

The New Spray for Aphids

No Odor
Non Poisonous
Pleasant to Use
Does Not Require Soap
Mixes with Other Sprays
Can be used with Hard or Soft Water
Costs Less than others

Made Only by
William Cooper & Nephews
Chicago

Distributed by:
PENINSULAR CHEMICAL CO.
ORLANDO
and
GULF FERTILIZER CO.
TAMPA

Write for descriptive circular.

Chase & Co.,

Growers Marketing Agents
State Bank Bldg.
Orlando, Florida

Our daily telegraphic market news is broadcast each evening at 7:30 P. M. from Radio Station WDBO at Winter Park, Flo. This is only one of the services we render our growers and shippers—Listen on 240 meters.

CHASE & CO.

1884

1926

FLORIDA SPECIAL

DEPENDABLE
HARDIE
SPRAYERS

GIVE LONGER YEARS OF SERVICE

Hardie Sprayers have always enjoyed the reputation for unusually long life through perfect alignment, micrometer fit and protective housings. But now we have the ultimate—the dust-proof hood—made possible by the Hardie cooling system. A non-chokable circulating pump connected with pipe coils immersed in spray tank keeps up a continuous circulation of cool water through engine—a simple yet perfect cooling system. This is only one of many exclusive Hardie features insuring greater operating efficiency and longer life. Write for complete descriptive catalog. You get the utmost for your money in a Hardie FLORIDA SPECIAL.

The Gulf Fertilizer Company

TAMPA, FLORIDA
10 Branches and Warehouses in Florida



HIGH PRESSURE!
LIGHT WEIGHT!
SHORT TURN!
HUNG LOW!

Splitting of fruit caused by Dieback and Ammoniation can be stopped by the use of

NICHOLS
TRIANGLE BRAND
BLUESTONE

(Copper Sulphate)

With the proper care and foresight you can make this your most profitable year. The use of Nichols Triangle Brand Bluestone is your best insurance against loss in your grove operations. It is the brand most generally used by Citrus growers and Truckers for Dieback control and the preparation of home made Bordeaux Mixtures.

TRIANGLE BRAND COPPER SULPHATE
THE STANDARD OF QUALITY
99% PURE

NICHOLS COPPER CO.

25 Broad St.  New York

CITRUS COMMENTS

Continued from page 20

April or early May being sure to finish by the 5th of May. Where only one spraying is given the 20th of April as an average time has given very good results.

It is not hard to make home made Bordeaux Oil and then you are sure of what you are using. Following are brief directions for making.

Dissolve bluestone in a wood barrel at the rate of one pound per gallon of water. Suspending the bluestone in a sack so that the bottom of the sack is a few inches below the surface of the water is the easiest way of getting it into solution. Fill the sprayer three fourths full of water and then dip in three gallons of bluestone solution per fifty gallons capacity of the sprayer. (For a 200 gallon tank pour in 12 gallons of bluestone solution.) Next start the sprayer and sow about 16 pounds of builders hydrate lime on top of the liquid in the spray tank. (The lime is used at the rate of four pounds per fifty gallons—thus the 200 gallon tank requires 16 pounds.) Last add the oil emulsion using it at about its regular strength—the 200 gallon tank would need 2½ gallons of the oil emulsion.

Tests made by Government men indicate that it pays to use Calcium as a spreader. This material is sold under several trade names and you can secure it from the insecticide dealers.

When using bordeaux sprays remember to spray the fruit, leaves, twigs, and small branches but leave the trunk and large branches as nearly unsprayed as possible. This will give the scale fungus a place to live for the bordeaux will kill all the friendly fungus that it hits.

WILL ORGANIZE TO ADVERTISE FLORIDA FRUITS

Continued from page 17

mirable subject on which to base the intensive advertising and merchandising effort above outlined. The facts are all in favor of Florida.

The public has long been educated to the healthful qualities of orange juice. Florida produces by far the juiciest and richest oranges on the American, or any other market, today. For definite proof of this, the Exchange a year ago had thorough chemical analyses made of Florida and California fruit. The report of findings is summarized under this cover and the net comparative results are illustrated.

Florida's grapefruit possess all the tonic qualities of orange juice in an incomparable per fruit volume. Our

THE CITRUS INDUSTRY

April, 1926

years ago and has since incorporated in all of our advertising.

This copy though is ideally fitted to any advertising which may be done by the proposed organization. The copy-right of this matter is the property of the Florida Citrus Exchange.

Yet to further the accomplishment of this publicity effort, we will give full rights to the use of it to the organization and every member in it, if these plans are adopted.

Exchange Will Support Fully

Gentlemen, the Florida Citrus Exchange is wholeheartedly behind this plan. Its far reaching possibilities for economic betterment of Florida's greatest industry and the consequent improved status of all citrus growers have been studied.

For certain success, we believe that no action should be taken unless a minimum of 75 per cent of the State's fruit is committed to the plan and enters the organization. Without the support of at least that volume, this tremendous undertaking cannot be well considered or executed.

**C. W. (Joe) Lyons**

Head of the Lyons Fertilizer Co., prominent citrus grower and developer and one of Florida's liveliest and most persistent boosters. Mr. Lyons has just been elected vice-president of the Tampa Board of Trade.

files carry much evidence of fact along this line. The response of grapefruit prices to advertising is also well illustrated by the results obtained last season through advertising done in several markets by the Fruitman's Club. You will remember that prices rose from \$2.00 to well over \$5.00 in a short time. Consider how profitable this work would have been, had it been consistent and national in scope.

California is now also stressing beauty, ease of peeling, separation into sectors, etc., factors which we know the oranges from this state possess. There is some consumer sales value in them. But these facts can be emphasized in our advertising of the Florida tangerine, which cannot be equalled among citrus fruits in these respects. With proper copy on the tangerine, we are able to refute this competition.

The ¼ More Juice Slogan

Probably the greatest single factor responsible for the headway which has been made against California in practically all northern markets east of the Mississippi has been the slogan, "¼ more Juice in Florida Fruit." This was developed by the Florida Citrus Exchange nearly two

PRATT WILL CONTINUE TALKS

Winter Park, Fla., April 8, 1926—Arrangements have just been concluded by the Central Florida Broadcasting Station, WDBO at Winter Park, Fla. for Mr. Archie M. Pratt, nationally known marketing expert, to give a series of informal talks beginning at 7:10 P. M. each Tuesday night for six weeks. The first talk will be broadcast on Apr. 13th, and subsequent talks on the 20th, 27th, May 4th, 11th and 18th.

These talks will be of vital interest to citrus growers and farmers in the State of Florida. Mr. Pratt will speak informally on the subject of crop prospects for the coming year, the workings of the Green Fruit Law, advertising co-operation between different marketing agencies and other problems that are of vital interest to the growers of Florida citrus fruit. All growers packers and shippers are urged to listen in for these talks which will last about ten minutes.

WDBO is a 500 watt broadcasting station and operates on 240 meters. It is located on the campus of Rollins College at Winter Park, Fla.

The Farmers' Educational and Cooperative Union will hold its semi-annual meeting at Pomona, Fla., the first of May. Secretary of Agriculture Jardine and other national leaders are expected to be present.

In writing advertisers please mention The Citrus Industry.

Florida Fruits and Flowers

A Monthly Magazine devoted to diversification in fruit growing and to home and civic ornamentation.

The kind of a magazine you will enjoy in your home. It tells of the different kinds of fruits which can be successfully grown in Florida and it aids with helpful suggestions about ornamentals and flowers for your home or community.

FLORIDA FRUITS AND FLOWERS costs but \$1.00 for twelve months. Pin a check or a dollar to this notice and mail to

Florida Fruits and Flowers

Bartow, Fla.

Let Us Supply Your Printing Needs

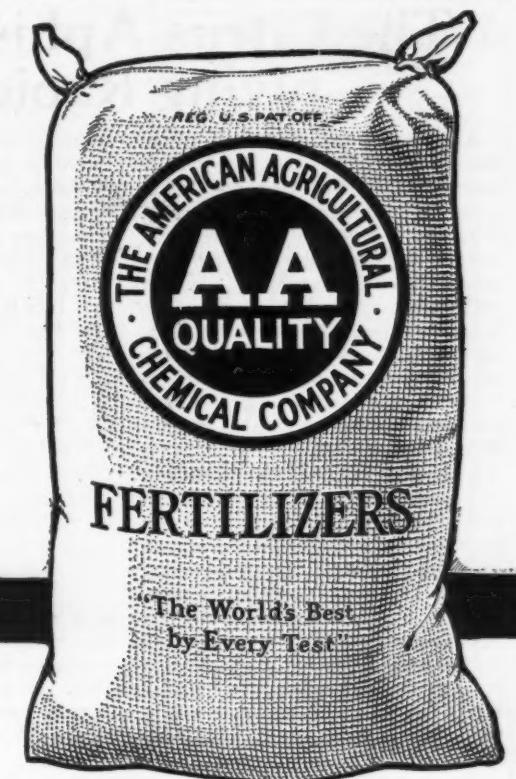
For Grove, Packing House, Counting Room or Factory. Our equipment is complete, our service prompt and satisfactory and our prices reasonable.

Bartow Printing Co.,

A. G. Mann, Mgr.

Bartow, Florida

Owned and operated by The Citrus Industry



Use these fertilizers made especially for citrus trees

Strong, sturdy citrus trees and quality fruit depend largely upon the use of the right fertilizers. Citrus trees, more than any other crop, must have exactly the kind of plant-food elements they need if the best results in growing and bearing are to be obtained.

**BRADLEY'S and
COE-MORTIMER**

Special Citrus Fertilizers

contain the best citrus plant foods known to agricultural science, so skillfully formulated and balanced that they meet every requirement in citrus culture.

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"AA QUALITY" FERTILIZERS

Manufactured by

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Chemical Company**

Byrne Bldg., Jacksonville, Fla.

Citrus Aphid

THE CITRUS INDUSTRY

April, 1926

The Citrus Aphid Multiplied Rapidly

A survey of the citrus belt by the Entomologists of the Experiment Station has shown that the citrus aphid is spreading very rapidly. Winged individuals are becoming common, which enables the aphid to spread from one grove to another. Altho the very first flush of growth is too far along to be seriously damaged by the aphids, it will probably be necessary to protect the later-blooming trees and perhaps the later stages of the spring flush of growth. It will undoubtedly be necessary to put up a vigorous fight for tangerines, Kings, and young trees, to prevent serious injury. When the infestation begins to spread generally over the groves it will be necessary to resort to either spraying or dusting.

On large trees dusting with a powder duster is, by all means, the cheapest and most effective way of dealing with aphids if one can find a quiet time to do it. But the least wind

seriously interferes with the kill. If the wind is heavy enough to move the moss on the trees it is a waste of time and material to try to dust. It is often very difficult, at this time of the year, to find a period quiet enough to make dusting effective.

If such a time cannot be found the next best thing is to resort to spraying. Any good contact insecticide will kill the aphids. The combination of nicotine-sulphate with a little soap for a spreader makes an effective killing agent. If there are red spiders or rust mites about, lime-sulphur can be substituted for the soap. Do not make the lime-sulphur stronger than 1 to 50 at this time of the year. For small trees, up to a height of 8 or 9 feet, the most effective way of dealing with aphids is to dust them with 3 per cent nicotine-sulphate-lime dust under a tent. Plans for making cheap tents for this purpose can upon request be supplied by the Experiment Station.

WILL INVESTIGATE ECONOMICS OF FLORIDA AGRICULTURAL INDUSTRIES

Gainesville, Fla.—The Experiment Station of the University of Florida will take up immediately an intensive study of a number of agricultural industries in the state with a view to determining the best and most profitable practices employed by the farmers, as well as the fundamental business principles which should be applied in economical and successful production of the various crops.

This line of work is made possible by the recent establishment, by the Board of Control, of a Department of Agricultural Economics in the Experiment Station, according to an announcement just made by Wilmot Newell, Director of the Station.

The Board of Control has selected for chief of this department Dr. C. V. Noble, at present assistant professor of farm management in Cornell University. Dr. Noble holds the degree of Ph.D. from Cornell University, is an experienced teacher and investigator in the fields of agricultural economics and farm management and has issued a number of publications based upon his research work in connection with farm cost accounting, living costs, studies of rural community conditions, etc. He will assume his duties at the Experi-

Electrification of farms will be talked and studied at the Rural Electrical Conference in Montgomery, Ala., April 6-8. Considerable test work of this kind has already been done in Alabama.

Two new varieties of pears, the Phelps and the Pulteney, have been developed by the New York Experiment Station at Geneva. They are of Bartlett parentage and are said to be resistant to blight, as well as satisfactory for human consumption.

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Limequats

By W. W. Yothers, Orlando, Fla.

It is well known to citrus growers that the key lime is exceedingly tender to frost. Perhaps it is the most easily hurt by frost of any citrus species or variety. On the other hand the kumquat is very resistant to cold. Some years ago Prof. Swingle of the U. S. Dept. of Agriculture conceived the idea that if these two species were crossed a new fruit having the hardy characteristics of the kumquat combined with the good qualities of the lime would be originated. This was done and the resulting fruit was called the "Limequat".

The "Limequat" is sour but not so much as the key lime. It is also very hardy but perhaps less so than the kumquat. The fruit is oblong, being more than an inch through the

long axis, yellow when ripe and altogether very attractive. It is a prolific and almost a continuous bearer. One limequat will make plenty of juice for a single drink and I think it much superior to that from the key lime.

This fruit should be grown locally for home consumption. Perhaps an acre would be enough for our local drink fountains in Orlando and another acre for the county as a whole. The shipping possibilities of this fruit have never been tried out on a commercial scale and no one can tell what these will develop into. Of course a grower should go into this specialty on a small scale at first and let the business gradually develop.

London Editor Pays Graceful Compliment to the Apopka Fruits

Some time ago the Apopka Chamber of Commerce sent to the editor of The Southwestern Star, (London, England) a box of Orange County fruit, packed by the Plymouth Citrus Exchange. This little courtesy was in return for the many kind things this editor had said about Florida and this section in particular, says the Apopka Chief. There have been numerous exchanges of fraternal greetings between The Chief and the Star, which hold many ideals in common. The London editor makes graceful acknowledgement of the box of fruit in his paper of February 19, a copy of which has just been received. We are pleased that he enjoyed the fruit and equally pleased to pass on to The Chief readers what he said about it. Read:

In the "South Western Star" we have often referred with admiration and approval to Apopka and its doings. Apopka is a town in Florida, a land flowing with the juice of oranges and grapefruit. Unbelievable as it may be to most of us in Battersea, there the sun shines all day and every day, and winter is unknown. We have lately received luscious proof of what can be accomplished by the sun and the cultural skill of the people of Apopka and its neighborhood. The proof consists of a generous case of products which are Floridian specialties—grapefruit and oranges. Until

this gift arrived we had never known the true flavour of the orange. Grown and ripened in Florida, oranges are a delight. They are of extremely large size. In their juicy richness all the power and virtues of unclouded sunshine seem to be concentrated. They have a sunny flavour; harshness and stringiness are far from them. As for the Floridian grapefruit, nothing grown elsewhere can approach them. Like the oranges, they are of remarkably large size, and they are full of lusciousness. So long as the fruit growers of Apopka raise such produce they can be assured of a leading place in the world's markets. We are extremely grateful to our friends, and particularly for the fraternal kindness of the editor of the Apopka "Chief." If Battersea's asparagus gardens were still existent, and were in full bearing, we would gladly reciprocate that kindness. As it is, Battersea is fruitful of goodwill, and a full measure of that we extend to our confreres in the sunny Southern State.

Farmers growing pure strains of cotton should demand market recognition of the better spinning value of their cotton. It has been found that pure varieties of cotton produce cotton better for spinning than is cotton produced from ordinary gin-run seed.

luniquats

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Per Cent Special	3	5
Citrus Special 4-8-8	4	8
Gem Orange Tree	4	6
Gem Tangerine	5 1/2	12 1/2
Satsuma Special	4	7 1/2

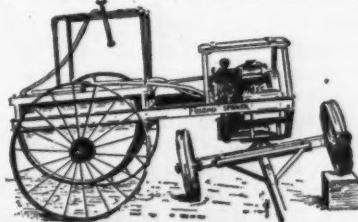
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 R. C. Allen, Auburndale.

Fay Back from California, Says Florida Must Produce Brighter Fruit

L. E. Fay, a prominent and experienced citrus grower and operator of Cocoa, Florida, has just returned from an extended trip through California and has given the following interview to a representative of the Cocoa Tribune. In this interview Mr. Fay stresses the necessity of Florida growers devoting greater attention to the production of bright and fancy fruit.

L. E. Fay and wife returned Friday from a ten weeks' trip to California going by way of the Panama Canal and returning by the Southern Pacific. A representative of The Tribune, believing that Mr. Fay might have something of interest to tell the readers of this paper, interviewed him in regard to the western state.

"How do California and Florida compare as to the growing of oranges?" asked the reporter.

As every reader of The Tribune knows there are no oranges grown in the world equal to the Indian River product, and I failed to find one orange in California which could in any way compare with those grown in this part of Florida. Florida is constantly encroaching on California orange market in the eastern states and it strikes me that it will not be many years, when Florida starts producing late oranges in increasing amounts, that Florida will have a complete monopoly on the golden fruit.

"How do the costs of production compare?"

Not only does Florida surpass in quality, but oranges are produced in Florida at a greatly reduced expense per box as compared with California. In the first place such land as is available for orange culture in California is high in price, and I was advised that mature orange groves were priced from \$2,500 to \$4,500 an acre. Practically every acre devoted to orange culture in California must be irrigated, and this involves a great expense before any trees can even be started. Much of this water is brought from great distances, and when it is available at the groves is led through a system of pipes or ditches, and then the water is per-

mitted to overflow the land. This means a labor cost in the preparation of the soil with ridges to hold the water until it sinks into the soil. After the grove has been irrigated, and the water settled, then the soil is again leveled and worked over, for if this is not done the surface will cake.

After three weeks this process of ridging the soil, application of water, re-leveling and again working must be repeated, and this has to be done all through the growing season. In Florida many of the grove owners seem to believe that the least a grove

is worked the better fruit is produced, and in looks the carefully groomed California grove is quite a contrast with the grove of the Florida orange culturist. But the Florida fruit, oh boy! It is full of juiciness and stored sunshine.

"How about frost danger?"

While about once in twenty-five years Florida has a killing frost, freezes are very common in California. While many remarked on the mildness of the past season in California, I saw a number of orange groves which looked as though a fire had run through them. The success-

BROGDEX-BROGDITE PRODUCTS

Inspection records show fruit shipped under the Brogdex-Brogdite (borax-paraffin) system of treatment is arriving with less than one-half of one per cent blue mold decay.

This new discovery controls blue mold decay and is the solution to the problem so long sought for by pomologists the world over.

California to Japan

Without Ice

Many California packing houses have installed the Brogdex-Brogdite system and are shipping to market in ventilated cars without a pound of ice. Recently shipments to Japan have gone forward without ice and splendid condition reported.

We have been licensed to put in this special equipment in Florida packing houses. The cost to the owners is based upon a small charge per box handled.

Full details gladly sent or wire our Brogdex-Brogdite man to call.

SKINNER MACHINERY COMPANY

World's Largest Manufacturers Packing House Equipment

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Dunedin, Florida

ful growers all resort to smudge pots to save their fruit, and these pots were used several times the past season. The cost of installing the smudge pots is about \$150 an acre, and when a freeze is impending these pots are filled with crude oil, and men make the rounds during the danger hours, keeping them filled and lighted. The principal cost is that of labor, as the crude oil is not very expensive, but the initial cost of the smudge pots and the renewal of them every ten years is quite a burden on the orange grower.

"Does California grow any grapefruit?"

There is little grapefruit grown in California, but it runs in size about a 126 orange, is pear shaped and very sour. "But you want to get some from the Imperial Valley," said one of my California friends. We drove out to the Imperial Valley, and saw this "superior grapefruit." You could go to any packing house in Cocoa and in the cull pile find grapefruit which would average far better than those in the Imperial Valley. The Imperial Valley fruit, like all grapefruit seen in California, was pear-shaped and with a hide which would cause it to be thrown into the discard if going through a Cocoa packing house. It also was not much of an improvement in sweetness on the balance of the California product, though a little better. Out in the Imperial Valley the temperature rises some days in summer to 120 to 130 degrees, and this may last for days at a time. Not a drop of rain, and the only moisture is that which comes through the irrigating ditches. The orange growers all through California have much to contend with in weather conditions. At Riverside, Redlands, and many of the orange growing sections the thermometer rises to 112 in the summer, while as stated before there are many freezing nights in the winter. The Florida grower who has his weather conditions practically made to order should congratulate himself that nature has done so much for this favored spot.

"Did you visit any of the packing houses?"

The packing houses throughout California are run not much differently from those in Florida. California has its citrus exchange, which controls a greater proportion of the fruit produced than does the Florida exchange. It also has independent packers like the Blue Goose. I looked over the expense sheets at one of the California packing houses, and the cost from the tree to the packed box delivered in the car was not far different from what it is through any

of our local packing houses. I was also shown a comparative growers' expense per box, and this run considerably higher than it is in Florida, the items showing the increased expenses being grove labor, irrigating and heating. The cost of fertilizer and spraying is about the same as in Florida. California packs its oranges in boxes a size smaller than is done in Florida. Packed boxes as they leave the packing houses weigh from 72 to 76 pounds per box, as against 85 to 100 in the Cocoa packing houses. Because of their smaller sized boxes, a smaller sized fruit naturally ensues. Thus oranges which would pack 176 to a box in Cocoa are put into a box holding but 150 in California. I looked over a manifest at one of the packing houses, and the average size fruit in the car was about 216's. There were one or two 126's, a sprinkling of 150's, quite a few 176's, the bulk of the car 200's and 216's, quite a few 250's, and a very considerable number running more than 300 to the box. In this

connection it must be remembered that these sizes placed in the California box were one size smaller than the rated orange placed in the Florida box.

"Where then, does California hold her own at all in the New York market?" asked the reporter.

Because of the much better appearance of the California fruit. California oranges run a much brighter color, and are not marked with rust and other insect pests to the extent of the Florida fruit. Many people go by show and appearances, and will choose the fruit which looks the best. Florida growers must and can meet this competition, by better attention to their spraying and keeping diseased conditions out of their groves. The California grower is working twelve months a year in the care of his grove and protection from insect pests while there are many Florida grove owners who seem to believe that their grove can be served best by going fishing during the summer months.



The summer fertilizer has great influence on the quality of the fruit, and care should be used to select the right formula.

"Soil Building and Summer Fertilizers" by Prof. B. F. Floyd—just off the press—should be read by every citrus grower in Florida. If you have not received a copy, write us.



WILSON & TOOMER FERTILIZER CO.

Manufacturers of Ideal Fertilizers

Jacksonville, Florida

"But how does California as a whole compare with Florida?"

There is no comparison between the rugged scenery of California, with its many snow-clad mountains, and the scenery in Florida. California is way ahead of Florida in good roads, but here Florida is fast catching up. There are three things in which Florida will always hold its lead. These are:

- Accessibility,
- Good beaches,
- Superior citrus fruits.

Florida is but an overnight ride from any of the populous centers of the United States. It is a long railroad ride over much uninteresting country from these populous centers to California. Florida is easily reached by motor cars, in which a constantly increasing portion of the people are travelling. From every direction good roads lead to Florida. To reach California means days and days of driving through a desert land. While I was in California, I saw but few cars with anything but a California license. I can stand for an hour in front of my place in Cocoa and count cars bearing the license tag of nearly every state in the Union. I visited practically every beach resort from San Francisco to Mexico, and not one compared in a remote degree with the Cocoa Beach. The sand was soft, prohibiting driving, and also making the water muddy looking as the waves rolled over. Florida beaches are an asset which cannot be taken away, and will continue to grow in popularity.

"How about the development work in California?"

A short time before going west, my wife and I drove through practically every important development proposition in Florida, when we came back it was with the impression that there were sufficient lots laid out in Florida to house all possible people who might call for them in the United States. I have given some attention to this development proposition in California. Practically everywhere we visited new additions and new town sites were being laid out, and when I estimated the large amount of acreage being put into lots, I figured that Florida was a veritable piker when it comes to turning acreage into lots. Everywhere we drove the active real estate man was there with his pamphlets, descriptive matter and his line of talk. Some people have thought that California had had a severe set-back, but while there may have been a let-up in the skyrocketing campaign, the holders of real estate are sitting tight, and waiting in sincere confidence for the next

THE CITRUS INDUSTRY

boom which will send their property still higher.

Florida real estate holders have little to fear from California competition. The principal complaint we heard against Florida was that hotel accommodations were so high in this state, but this should be rectified by the increasing competition assured by the large number of hotels now under construction. Residence property in California is not very much different in price from property equally favorably situated in Florida. Owing to the embargo the past few months, building costs have been unreasonably increased in this state, but with better shipping facilities this handicap should be removed.

FLORIDA BANANA

GROWERS ASSOCIATION SEMI-ANNUAL CONVENTION

April 21st at Eustis, Florida is the date and place set for the semi-annual convention of all those interested in producing bananas within the boundaries of the State of Florida.

The Florida Banana Growers Association is now on a business basis and is working to develop a commercial banana industry thru educational and cooperative methods.

In order to make the convention a meeting of the growers and for the growers, it has been decided to feature talks by persons who have had experience in producing bananas in Florida or who have worked the fruit and by those who are interested in the business and have had experience along the lines of cooperative effort.

All who are interested in banana culture consider this and plan to be with us.

Florida's greatness will eventually depend upon the development of her agricultural resources. Here is a means to accomplish a portion of that development. Come to the convention and learn from those who are growing bananas successfully.

SOIL BUILDING AND SUMMER FERTILIZERS

The Wilson & Toomer Fertilizer Company of Jacksonville, Fla., announce the issuance of the above entitled booklet by their organization, which came from the press on April 10. About 15,000 of these booklets have been printed and will be mailed to interested citrus growers of Florida. This is a valuable booklet and should be in the hands of every grower.

April, 1926



Consistent Application Of

Orange Belt Brands

Will Make A Difference In The Appearance Of Your Trees And In The Quality Of Your Fruit

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Lyons Fertilizer Co.

Eighth Floor

Citrus Exchange Building
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Quality Fertilizer

for

Quality Fruit

THE MARKET VALUE**OF BRIGHT FRUIT**

Continued from page 6
established trade mark. This is a great benefit to the producer of high class fruit in Florida and is recognized more than ever year by year. Advertising of this class of fruit can be effected with great success while general advertising of Florida fruits as a whole would no doubt be a considerable waste of money.

Wholesalers and retailers are always pleased to handle merchandise under nationally known trade-names as these are easily sold and it is unnecessary for the handlers to explain the merits of the products to the buyers. It is well known that we prefer advertised articles and always buy those that have merit—such as the Heinz products, ivory soap, holeproof hosiery and other products that have been made famous through their advertisements and backed by quality.

The marketing of good fruit is a specialized business and growers producing good fruit will naturally see a sales organization that is handling almost exclusively this line. Good fruit, like people is known by the company it keeps.

Good, bright, clean fruit properly handled will in the future as well as in the past, be profitable to the grower. Poor fruit has generally been unprofitable and in all probability will remain so in future years.

The wholesaler, the retailer, and the consuming trade is getting more critical each season; therefore it is up to the growers to produce good quality fruit and to see that the packing house that handles it, both in harvesting and packing is doing this work in the best possible manner.

If growers will give the necessary attention to production; have their fruit handled through packing houses that give the fruit proper attention; and then select a marketing organization that will sell their fruit along scientific lines, backed up by extensive advertising, they need have no fear for the future of the citrus industry in Florida.

SOME FACTORS IN SPRAYING AND DUSTING

Continued from page 10
fected with the scab fungus, will not prevent or cure Scab markings on the fruit. One application of oil sprays, after the trees have become thoroughly infested with purple or red scales and the individual scales are grouped and piled upon one another, is not likely to give entire control. The use of oil sprays in excessive strength, gives better kill but

THE CITRUS INDUSTRY

frequently injures the tree and fruit. The use of the spray in midday in extremely hot weather may cause burning of the fruit.

THIRD, THE MAN BEHIND THE GUN. The best sprayers and the best materials on the market cannot control the diseases and pests unless they are properly applied. Poor application is by far the most common cause for failure to get results from spraying and dusting. The inefficient operator is an expensive employee.

To properly spray a tree, every part to be protected should be thoroughly wet with spray. It is not always easy for the operator working close to the tree to see from the appearance of the tree that he has reached every part. The top of the tree is the part that is more often overlooked. A system adopted by many is to spray the top of the tree first when walking around the tree counter-clock-wise, catching the remainder of the tree when going in the reverse direction before moving on to the next tree.

Teams that move too fast or too far, leaving the operator an insufficient length of hose to do his work well is also a frequent cause for poor spraying.

In conclusion, to make bright fruit by spraying and dusting requires knowledge and attention to detail. It is a mistake to use any but the best of help in this work. It is too frequently the case that the grower is willing to condemn his machinery or materials whereas the fault is all his own, and before he does this he should first satisfy his conscience that he has done his work well.

OUR SOILS NEED HUMUS

On our southern soils we need to conserve our humus supply, and the main thing is to get it. If you haven't turned under a crop occasionally and feel that you cannot, turn one under anyway, but get humus by all means, in order that you may get full benefit of the other things you do. If you find, after you have grown a crop of velvet beans, if you feel that you should feed them to your livestock in order to get the maximum value, then feed them, but get as much as you can of the manure back into the soil, but by all means grow a leguminous crop, because even though you remove a large proportion of the nitrogen that that crop may have; even though you may remove as much nitrogen from the soil as the leguminous crop adds, yet we find that there is an increased, a better productive capacity in that soil.

SPRAY MATERIALS

We are headquarters for all heavy chemicals used in the preparation of Sprays

Sulphur

Blue Stone

Fish Oil Soap

Nicotine

Caustic Soda

A card will bring you our prices, you may find that there is a considerable saving in our prices.

Also

FERTILIZER MATERIALS**CHASE & CO.**

Sanford - Florida

GROWERS SUPPLIES

Bright Fruit

A \$7,804,700 Faith In Bright Fruit

By Larry S. Lynch, Orlando Chamber of Commerce

"Orange County"—note that name—has just raised more than eight hundred thousand dollars, in six days for a new Y. M. C. A.

The next day the same county passed a bond issue for seven million dollars to build three hundred and forty miles of new paved roads.

Probably before this goes to press a campaign will be finished to raise three hundred thousand dollars in Orange County for Rollins College at Winter Park.

In the "Y" campaign some world's records were broken. Never before has a community of forty-two thousand people raised eight hundred thousand dollars for a Y. M. C. A. The

Orange county is a great producer of citrus fruits. No city in Florida is taking a deeper interest in its back-country than is Orlando, which is the central metropolis of the State.

The citrus organizations operating with Orlando as a base are workers for and believers in bright fruit. The Orlando Chamber of Commerce, the Orange County Chamber of Commerce the County Agricultural Agent, County Demonstration Agent, and other individuals and organizations are all preaching and teaching the production of bright fruit. Manufacturers and distributors of fertilizers, gases, insecticides, dusters and other agencies for the destruction of the

ly diversified, the citrus industry is the backbone of agricultural Orange County.

But the faith of the people of this county and in this State, is based upon a belief that citrus growers are sane enough and wise enough and advanced enough to take the precautions necessary to protect their investments of time and labor by producing a better fruit which must command a better price in the competitive markets of the world.

The seven million dollar bond issue was passed to enable farmers better opportunity to market their crops advantageously, and to make it possible for other growers to develop sections which have not heretofore been accessible.

The organization heads, the supply men, real estate men, wholesale and retail merchants, Chamber of Commerce and other civic bodies who loyally supported the appeals for a "Y" and for road bonds had faith in Florida growers. Their faith is founded on the experience of the past, that Florida agriculturists wisely plan to protect their groves so that the owners will receive a maximum return over a period of years, that they are intelligent enough and alert enough



last two hundred and seventy thousand dollars was raised in twenty-four hours. Of that the last eighty-five thousand dollars was raised in eighty-eight minutes: almost a thousand dollars a minute, for nearly an hour and one-half—in a community of forty-two thousand, which had just subscribed nearly three-quarters of a million dollars to the same fund. These are all World's records.

But what have they to do with bright fruit?

There is a very direct relationship between bright fruit and these records.

Orlando is the headquarters for a majority of the fruit-marketing organizations in the Sunshine State.

forces injurious to citrus trees, are strenuously advocating the employment of measures which will prevent disease and produce brighter, better fruit.

The Orlando Realty Board has acted officially towards the preservation of citrus trees.

The Orlando Chamber of Commerce has stated that if no tourists came to Orlando and if every subdivision real estate operator in the city should go out of business, that the city would still continue to grow and to prosper.

This statement was based purely upon the County's ability to produce wealth from the soil. And while agriculture in Orange County is broad-

WANTED

HIGH TYPE FERTILIZER SALESMAN

We have opening in our Sales Organization for an A-1 fertilizer salesman who can produce results. Must be a hustler, not over 40 years of age, have pleasing personality and know how to handle the trade. Excellent opportunity to the man who measures up to our requirements. Address Armour Fertilizer Works, P. O. Box 115, Jacksonville, Florida, giving your age and record in detail.

April, 1926

THE CITRUS INDUSTRY

to look after their own interests and thus insure the economic stability of Orange County and the State of Florida regardless of the real estate harvest or the tourist crop.

Orange County folks believe in bright fruit. Because they believe in bright fruit they have pledged to give eight hundred thousands dollars to the Y. M. C. A., they have pledged to build seven million dollars worth of hard-surfaced roads, they will make a unique educational institution

possible. But they cannot do these things unless the citrus growers themselves are prosperous. The eyes of the world are turned on the State which shows such faith in itself, such faith in the possibilities of agriculture, the world's fundamental industry.

Acquiculture is a term that has been applied to commercial fisheries. Farms and fisheries are the only two sources of human food.

Thirty-three

Parasites of livestock in the Southern states and their relation to animal industry in that region are soon to be investigated by the Bureau of Animal Industry of the United States Department of Agriculture. The sheep parasite station which has been maintained at Vienna, Va., during recent years has been abandoned and the sheep shipped to the new Department Station at McNeill, Miss., where the animal parasite study is to be made.

Is Your Fruit Scabby? Spotted With Melanose?

Take a look at your fruit that is still unpicked. As a casual glance it may look good, but the chances are you will find much of it that is scabby, or spotted with melanose, unless you sprayed carefully last spring for these diseases. If your fruit has been picked, look at your packing house reports of grades. Scabby and melanose fruit goes into the low grades and culls.

Save Losses

There is no need to have fruit blemished by diseases. The fungi which cause scab and melanose can be controlled, and the losses from low grades and culls, because of these diseases, can be wiped out completely.

Controls Pests

SCHNARRS BORDOL MULSION will control scab and melanose at a truly remarkable saving in the cost of spraying. Owing to its perfectly balanced combination of copper and oil, BORDOL MULSION gives thorough control of scab

and kindred diseases without causing a heavy increase in scale and white fly.

Small Cost

To spray your grove with Bordol Mul-
sion now will give you far better control
of scab and melanose than you probably
think. The cost is much less than the
cost of bordeaux mixture followed by oil
emulsion, and the control of scale is
much better.
Soon after the fruit sets is the time for
effective spraying. Place your order
NOW. We will gladly help you deter-
mine the most effective and economical
spraying and dusting schedule.

Our Catalogue of Schnarr Products contains a complete
list of everything needed for spraying and dusting. Send
for your copy.

J. Schnarr & Company

Orlando, Fla.

Winter, Haven, Fla.

Thirty-four

FILM SHOWS USES MADE OF WASTE ORANGES AND LEMONS

How scientific research helped to establish the manufacture of citrus by-products, "the balance wheel of waste fruit that formerly was worse than a total loss, is shown in a new United States Department of Agriculture motion picture, "Profits from Cull Oranges and Lemons."

A remarkable collection of culls, victims of the grading processes which the marketing problem has brought about, and which are not wormy or decayed, but are blemished irregular or odd-sized, are shown in the film to illustrate the types of oranges and lemons which represented 30 per cent of the annual production. The research work of the Bureau of Chemistry in a laboratory at Los Angeles is shown as a sample of the efforts that have brought about the establishment of several large plants manufacturing lemon oil, orange oil, citric acid, marmalade and pectin, orange juice, and pectin.

The film is one reel in length. Copies may be borrowed for short periods, or may be purchased at the laboratory charge. A complete list of the department's films, with information on the method of distributing them, is given in Miscellaneous Circular 27, which may be obtained, as long as the supply lasts.

BRITISH HONDURAS GRAPEFRUIT

In a report received in the Department of Commerce, Mr. E. A. Bonnet, American Vice Consul, at Belize, British Honduras, states that grapefruit and other citrus fruits are easily produced in British Honduras. The quality of the fruit is good; if markets were readily available, citrus-fruit growing would become an important industry, adds Mr. Bonnet. Present transportation facilities make it extremely difficult to deliver British Honduras citrus fruit in Canadian, English or European markets in good condition.

The citrus industry is receiving the attention of the local government, and attempts are being made to overcome the existing difficulties adds Mr. Bonnet. Improvements in methods of picking, and the grading and packing of the fruit have already been made. Mr. Bonnet concludes that if suitable transportation facilities can be arranged, insuring good delivery in Canadian or English markets, the citrus-fruit industry will develop speedily.

THE CITRUS INDUSTRY

In writing advertisers please mention The Citrus Industry.

CLASSIFIED ADVERTISEMENTS

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

REAL ESTATE

WILL EXCHANGE West Texas cattle ranch for unimproved or improved land in Florida. What have you? Give price and full particulars. T. E. Bartlett, 3410 McKinley Ave., El Paso, Tex.

FIVE ACRES and a town lot, all for \$700.00 Biggest bargain in Florida. Certain money maker. We want reliable salesmen to present this meritorious proposition to investors. Sumter Gardens and Bushnell Park lots. Every purchaser highly pleased. Florida Garden Land Company, Box 1759, St. Petersburg, Florida.

FOR SALE—Cleopatra Mandarine seedlings. September delivery, enter order now. Cavendish banana plants and avocado trees. Write for price list. R. E. Skinner, Hillsboro Hotel, Tampa, Florida. May-4t.

BANANA PLANTS for sale. Improved Cavendish, Hart, Orinoco, Ladyfinger. Information free. W. E. Bolles, Oldsmar, Fla.

"BOOK OF TRUTH"
For planters of new groves
Is yours for the asking,
Write Today.
OCKLAWAHA NURSERIES INC.
"Pedigreed Citrus Trees"
Lake Jem, Florida

FOR SALE CHEAP—Eleven acres high, rocky citrus land: 4 acres cleared with small house, and large nice bearing orange trees full of fruit. Nicely located near Altamonte Springs, Fla. For particulars write H. A. Lunquise, 41 N. W. 29th St., Miami, Fla.

POLK LAKE NURSERIES
Offer to the grower young trees of standard variety, backed by 30 years of nursery experience and a guarantee which only honest dealing can justify. For full information address A. H. Sloan, Box 418, Bartow, Fla.

WANT TO SELL HALF INTEREST IN FIFTEEN ACRE SATSUMA BEARING GROVE ON HIGHWAY NEAR PANAMA CITY. ROBT. LAMBERT, OWNER. FOUNTAIN, FLA.

SATSUMA BUDWOOD from Bearing Trees. Hills Fruit Farm, Panama City, Fla.

For Sale—Pineapple land in winterless Florida. \$15 an acre. Almont Ake. Venus Fla.

QUALITY FRUIT comes from Cleopatra mandarin stocks; ask the introducer for prices of all Citrus trees, on this and on other stocks. (42nd year in Citrus nursery, and first growers of Rough Lemon stock) ROYAL PALM NURSERIES, ONECO, FLA.

MISCELLANEOUS

FOR SALE—Dairy and stable manure.

April, 1926

car lots. Link & Bagley, Box 464, Tampa, Florida.

WHITE WYANDOTT Cockrels, regal strain—the best in the country, direct from Martin pens. Utility and show birds \$5.00 each; also eggs for hatching \$5.00 per dozen. W. A. King, Gen. Del., St. Petersburg, Florida.

UP-TO-DATE BUSINESS STATIONERY PRINTING 1000 20 lb. 8 1/2 x 11 White Hammermill Bond Letterheads \$3.70. No. 6% White Wove Envelopes \$3.00. Business Cards \$2.60. Samples Free. Moulton Printing Company, 1410-C East 8th, Kansas City, Missouri.

REPOSSESSED player piano may be purchased for small unpaid balance by reliable parties on easy payments. We guarantee this player to be in excellent condition and a very unusual buy. Plenty of good rolls and bench included. M. L. Price Music Co., Tampa, & Zack St., Tampa.

SOUTHDOWN SHEEP. White Rocks, Toulouse Geese, Guineas, Angora and Milk Goats. Circular free. Woodburn, Clifton, Va.

AGENTS—Quality Shoes, quick sellers. Big commissions, immediate returns! Repeat orders. Experience unnecessary. Write full particulars. Tanners Shoe, 2011 C St., Boston.

FOR SALE

Remington Portable Typewriter with standard keyboard. Has all advantages of larger machine. Ideal for farm and home use. \$60. cash or sold on easy terms. Remington Typewriter Co., 108 Parker St., Tampa, Florida.

FARM—GROVE—HOME

22 acres large bearing grove; modern two-story, 8 room house, completely furnished on third largest lake in state in thriving town; good roads, church, school; complete line farm implements and tools. P. F. Cloonan, Yalaha, Lake County, Florida.

HIGH BLOOD PRESSURE easily, inexpensively overcome, without drugs. Send address. Dr. J. B. Stokes, Mohawk, Florida.

Laredo soy beans, considered free from nematode, excellent for hay and soil improvement. Write the Baldwin County Seed Growers Association, Loxley, Alabama, for prices.

FOR SALE: Rebuilt Band Instruments from \$5.00 up. Terms if desired. M. L. Price Music Co. State Distributors—C. G. Conn Band Instruments, Tampa.

Wanted AT ONCE few dozen fresh bitter-sour Marmalade Oranges. Price C. O. D. M. L. Manning, 15 West Chase St., Baltimore, Md.

WANTED to correspond with growers of the Red Guava. Business. M. L. Manning, Qt West Chase Street, Baltimore, Md.

MILLION Porto Rico Potato Plants, \$2.50-1000. W. W. WILLIAMS, QUITMAN, GA.

"A GOOD HAND LENS is necessary to produce good fruit. R. E. Lenfest, Winter Park carries a stock of the best and most practical for the convenience of growers. A good Lens saves spraying money. Write for prices."

WANTED—Salesman 30-40 years old. Must be familiar with Florida Citrus insect control. Position involves field work. Box 1254 Citrus Industry.

FARMER AGENTS: Make \$25.00 weekly selling Comet Sprayers. Profitable winter employment. You take orders. We deliver and collect. Commissions weekly. Established 35 years. Particulars free. Rusler Co., Box C-18, Johnstown, Ohio.

EARLY BEARING Papershell Pecan trees, budded or grafted and guaranteed. Great shortage this year. Write for catalog today. Bass Pecan Company, Lumberton, Miss.

We Collect Notes, Accounts, Claims anywhere in world. No charges unless collected. We have collected in every State in Union, Canada and foreign countries. 25 years experience. MAY'S COLLECTION AGENCY, 28 Tinker Building Orlando, Fla.

Nearly Half A Century of Leadership!

To think on it a second, there is a great deal of meaning for you behind the phrase, "world's oldest and largest," especially when applied to a citrus nursery.

To be the world's oldest implies not only long years of sound experience, but a reputation for business integrity solidly built and jealously maintained.

To be the world's largest means in this day and age a leadership in quality of product, economy of costs and prices, and superiority of service.

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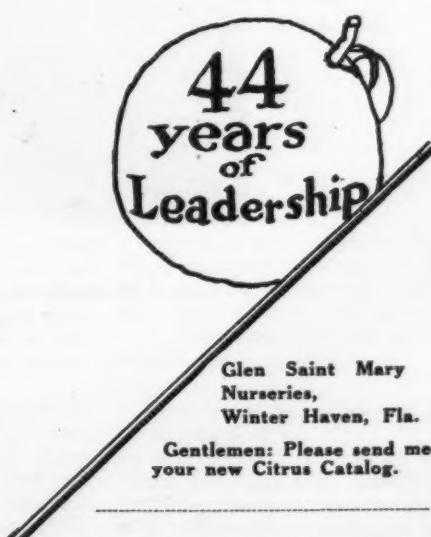
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